





## Focus on Data

*Note: Invitational prompts are sometimes tagged to prior grade level standards.*

<b>Grade K</b>	<p>What kinds of toys do you see?</p> <p>What can you tell me about the toys?</p>
<b>Grade 1</b>	<p>How many toys are round? How many have straight sides?</p> <p>Do you think there are more round toys or toys with straight sides? Why?</p> <p>(K.MD and 1.MD)</p>
<b>Grade 2</b>	<p>Complete the sentences:</p> <p>There are 2 more _____ than _____.</p> <p>There are 8 _____.</p> <p>In this picture there are groups of _____.</p> <p>The number of _____ is less than the number of _____.</p> <p>(1.MD and 2.MD.10)</p>
<b>Grade 3</b>	<p>Pick four kinds of toys and count them.</p> <p>If you made a picture graph about the number of each kind, what could you use as a symbol for each toy?</p> <p>(2.MD)</p>





# Talking Math

## Invitational 1(continued)



### Focus on Data

*Note: Invitational prompts are sometimes tagged to prior grade level standards.*

#### Grade 4

These are the lengths of the cars in the picture, organized by color:

- Turquoise  $1 \frac{3}{4}$  inch
- Yellow  $1 \frac{1}{4}$  inch
- Red  $1 \frac{1}{2}$  inch
- Green  $1 \frac{3}{4}$  inch
- Orange  $1 \frac{3}{4}$  inch

Describe how you would make a line plot about the length of the cars.

(3.MD)

#### Grade 5

These are the lengths of the blocks in the picture, organized by color:

- Turquoise  $1 \frac{1}{4}$  inch
- Yellow  $1 \frac{1}{2}$  inch
- Red  $1 \frac{1}{2}$  inch
- Green  $1 \frac{3}{8}$  inch
- Orange  $1 \frac{1}{2}$  inch

Describe how you would make a line plot of this data about the length of the cars.

(4.MD.4)





### Launch

Tell a story about the picture.

### Grade 1

How many puppies could join so there would be 10 puppies in all? How many puppies could join so there would be **more** than 10 puppies in all? Explain.



### Focus on Counting & Operations

*Note: Invitational prompts are sometimes tagged to prior grade level standards.*

<b>Grade K</b>	What can you count in the picture? How would you count them? (K.CC)
<b>Grade 1</b>	How many more puppies would make 10 puppies? How many puppies could join these puppies so there would be <b>more</b> than 10 puppies in all? Explain. (K.OA.4 and 1.OA.2)
<b>Grade 2</b>	Some of these puppies jumped out of the basket and 2 were left in the basket. How many puppies jumped out? Write an equation to show the situation. (1.OA.1)
<b>Grade 3</b>	There are 5 puppies in the basket. Count by fives to 30. How could counting by fives help you find out how many puppies would be in 6 such baskets? (2.NBT.2 and 3.OA.1)
<b>Grade 4</b>	We see 5 puppies can sit in a basket. How many baskets would there need to be for 45 puppies? How many baskets would be needed for 52 puppies? Explain your thinking. (3.OA.3 and 4.OA.3)
<b>Grade 5</b>	Two of these puppies weigh 263 grams each and three of the puppies weigh 315 grams each. Find the weight of all the puppies. (4.NBT.4 and 5.OA.1)



### Launch

What shapes do you see?

How would you describe them?

**Grade 3**

How many squares do you think are on all of the sides of the cube toy?



## Focus on Geometry & Measurement

*Note: Invitational prompts are sometimes tagged to prior grade level standards.*

<b>Grade K</b>	Where do you see shapes in the picture? What shapes do you see? How would you describe them? (K.G.A and K.G.B)
<b>Grade 1</b>	Based on the K responses, complete the sentences: The shapes I see are different because _____. The shapes I see are the same because _____. (K.G.4 and 1.G.A)
<b>Grade 2</b>	Where do you see shapes in the cube toy that can match this expression? $3 + 3 + 3$ (1.OA.2 and 2.G.2)
<b>Grade 3</b>	Where do you see shapes in the cube toy that can match these equations? $3 + 3 + 3 = 9$ $9 + 9 + 9 = 27$ How many squares do you think are on all of the sides of the cube toy? Explain. Write an equation to show your thinking. (2.OA.4 and 3.MD.C)
<b>Grade 4</b>	If each of the squares on the blue side of the cube toy has a side length of about 3 centimeters, what is the area of the entire blue side? (3.MD.7)
<b>Grade 5</b>	If the perimeter of the blue side of this cube toy is 12 inches, what is the area of the blue side? (4.MD.3 and 5.MD.C)





### Launch

What math questions could you ask about this picture?

**Grade 3**

Is the ruler in the picture used for measuring in inches or in centimeters? How do you know?





# Talking Math



## Focus on Measurement

*Note: Invitational prompts are sometimes tagged to prior grade level standards.*

<b>Grade K</b>	Find some of these objects or ones like them around you. Hold one of them in your hand. Does it feel heavy or light to you? Explain. (K.MD)
<b>Grade 1</b>	Use the picture to complete the sentences: The _____ is shorter than the _____. The _____ is taller than the _____. (K.MD.2, .MD.1)
<b>Grade 2</b>	Find some of these objects, or ones like them, around you. How many pencils are equal in length to your scissors? How many pencils are equal in length to your ruler? (1.MD.2 and 2.MD.1)
<b>Grade 3</b>	Is the ruler in the picture used for measuring in inches or in centimeters? How do you know? What do you notice about the marks in between the numbers on the ruler? What could they be useful for? (2.MD.3. and 3.MD.4)
<b>Grade 4</b>	Find some of these objects, or ones like them, around you How long are some of your pencils? How long are the scissors at home? (3.MD.4)
<b>Grade 5</b>	If all the objects in the picture were lined up end to end, they would make a line about 4 feet long. How many inches are in 4 feet?  (4.MD.1 and 5.MD. 1)



# Talking Math

## Invitational 5



### Launch

What do you notice?

What do you wonder?

**Grade K**

What can you count in the picture?

Describe how you would count them?





# Talking Math

# Invitational 5



## Focus on Counting & Number

*Note: Invitational prompts are sometimes tagged to prior grade level standards.*

<b>Grade K</b>	What can you count in the picture? Describe how you would count them? (K.CC.2 and K.CC.3)
<b>Grade 1</b>	How many more books would make 10 books? If Priya took home 4 of these books, how many books would be left? (K.OA.4 and 1.OA.1)
<b>Grade 2</b>	If these books were left over after Noah gave away 9 books, how many books were there before Noah gave 9 away? Write an equation to represent your thinking. (1.OA.1 and 2.OA.1)
<b>Grade 3</b>	Is the number of books odd or even? Explain. Write an equation to represent 2 sets of books like this. Write an equation to represent 3 sets of books like this. What do you notice about your equations? (2.OA.3 and 3.OA.1)
<b>Grade 4</b>	Three of these books have 250 pages, three of the books have 260 pages and two of the books have 248 pages. How many pages are in all eight books? (3.NBT.2)
<b>Grade 5</b>	Each of the books is $\frac{21}{100}$ meter long. What is the length of each book written as a decimal? What is the total length, in meters, of all eight of the books? (4.NF.6 and 5.NBT.7)





# Talking Math

Day 1



## Launch

What math questions could you ask about this picture?

**Grade  
K**

What shapes do you see?

Complete the sentence:

\_\_\_\_\_ is taller than \_\_\_\_\_.

Use blocks to make the building.





<p><b>Grade K</b></p>	<p>What shapes do you see? (K.G.A.2)</p> <p>Complete this sentence: _____ is taller than _____. (K.MD.A.2)</p> <p>Use blocks to make the building. (K.G.B.5)</p>
<p><b>Grade 1</b></p>	<p>Where do you see triangles in the picture? (1.G.A.1)</p> <p>What shapes in the picture could you put together to make a different shape? (1.G.A.2)</p>
<p><b>Grade 2</b></p>	<p>Where do you see rows and columns of windows in the picture? Describe how you see them. (2.G.A.2)</p>
<p><b>Grade 3</b></p>	<p>Describe how you might find the area and perimeter of the courtyard. (3.MD.C.6)</p>
<p><b>Grade 4</b></p>	<p>Where do you see parallel or perpendicular segments in the picture? Where do you see symmetry? (4.G.A)</p>
<p><b>Grade 5</b></p>	<p>Estimate the height of one column in meters. What is that height in centimeters? What is that height in kilometers? (5.MD.A.1)</p>



### Launch

How many do you see?

How do you see them?

### Grade 5

Generally, there is between  $\frac{1}{4}$  and  $\frac{1}{3}$  cup of juice in one orange.

About how much juice would half an orange produce?

How much juice could all of the oranges in the picture produce?



# Talking Math

Day 2



<b>Grade K</b>	How many do you see and how do you see them? (K.CC.A.3)
<b>Grade 1</b>	How many more whole oranges are there than half oranges? (1.OA.A.1)
<b>Grade 2</b>	Sketch how you could arrange the oranges in an array. (2.OA.C.4)
<b>Grade 3</b>	How many whole oranges do you see? How many halves? (3.NF.A.1)
<b>Grade 4</b>	How many oranges are there altogether? How many $\frac{1}{4}$ 's? How many $\frac{1}{8}$ 's? (4.NF.B.3)
<b>Grade 5</b>	Generally there is between $\frac{1}{4}$ and $\frac{1}{3}$ cup of juice in one orange.  About how much juice would half an orange produce? (5.NF.B.7)  How much juice could all of the oranges in the picture produce?





### Launch

What do you notice?

What do you wonder?

### Grade 2

Describe how you would count the number of duck feet in the picture.





<b>Grade K</b>	Are there more or less than 15 baby ducks? How could you find out? (K.CC.C.6)
<b>Grade 1</b>	If 12 more ducks joined the group, how many would there be altogether? Explain or show how you know. (1.NBT.C.4)
<b>Grade 2</b>	Describe how you would count the number of duck feet in the picture. (2.OA.C.1)
<b>Grade 3</b>	The ducks sleep in straw beds that hold 3 ducks at a time. How many straw beds would be needed for the ducks in the picture? How many beds would be needed if there were 42 ducks? (3.OA.B.6)
<b>Grade 4</b>	Ducks sleep about $10\frac{8}{10}$ hours per day. About how many hours does each duck sleep in 3 days? Explain or show how you know. (4.NF.B.3.C)
<b>Grade 5</b>	When feeding baby ducks $\frac{1}{4}$ bag of feed is divided among 8 feeding bowls. How much of a feedbag will be in each bowl? Explain or show how you know. (5.NF.B.7)



*This is one pea pod split open.*

## Launch

What math questions do you have, could you ask, and could you answer about this picture?

**Grade  
3**

A serving of peas is about 9 pea pods. How many peas are in a serving?



*This is 1 pea pod split open.*

<b>Grade K</b>	How many peas are there? Draw other ways the same peas could be arranged on each side. (K.CC.A.3)
<b>Grade 1</b>	After a rabbit ate some peas from this pod there were 7 peas left. How many peas did the rabbit eat? (1.OA.A.1)
<b>Grade 2</b>	Is the number of peas in the pod odd or even? How do you know? (2.OA.C.3)
<b>Grade 3</b>	A serving of peas is about 9 pea pods. About how many peas are in a serving? (3.NBT.A.3)
<b>Grade 4</b>	Fun Fact: In 1984 Janet Harris of Sussex, UK set the world record for eating 7,175 peas. About how many pods would that be? How do you know? (4.NBT.B.6)
<b>Grade 5</b>	Janet Harris (see fun fact above) ate 7,175 peas in 1 hour. About how many peas did she eat in a minute? (5.NBT.B.6)



# Talking Math

Day 5



## Launch

Tell a story about the picture.

**Grade  
1**

If 8 more elephants came to the watering hole, how many elephants would there be? Explain or show how you know.





# Talking Math

Day 5



<b>Grade K</b>	How many elephants are in the picture? How many more would make 10? (K.OA.A.4)
<b>Grade 1</b>	If 8 more elephants came to the watering hole how many elephants would there be? (1.OA.C.6)
<b>Grade 2</b>	One of the baby elephants weighs 180 pounds. Another baby elephant weighs 10 pounds less than that. How much does the other baby elephant weigh? (2.NBT.B.8)
<b>Grade 3</b>	A baby elephant typically weighs about 200 pounds. What are three possible weights for an elephant whose weight would round to 200? (3.NBT.A.1)
<b>Grade 4</b>	A baby elephant typically weighs about 200 pounds. An adult female elephant is about 30 times heavier than a baby elephant. List some possible weights of a female elephant? How do you know? (4.OA.A.2)
<b>Grade 5</b>	An African forest elephant's tusks grow about 17 cm each year. If an elephant lives to be 65 years old, about how long, in meters, would their tusks be? (5.NBT.B.5 and 5.MD.A.1)





## Launch

Tell a story about what happened before this picture was taken.

**Grade**  
**4**

The green basil leaves are about  $1\frac{1}{2}$  inches long. About how long would a line of 6 basil leaves be?

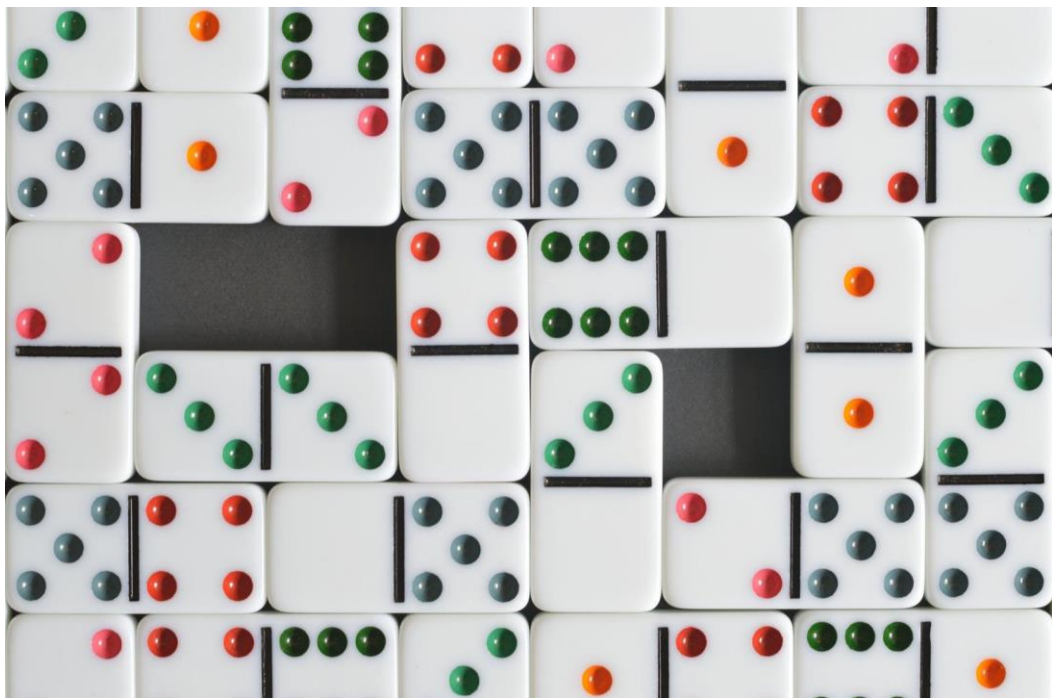


<p><b>Grade K</b></p>	<p>How many red fruits and vegetables do you see? How many green leaves do you see? Are there more red vegetables or green leaves? (K.MD.B.3, K.CC.C.6)</p>
<p><b>Grade 1</b></p>	<p>Think of 3 categories to sort the fruits and vegetables. Create a data display. Write 2 questions for someone to answer about the data in your display. (1.MD.C.4)</p>
<p><b>Grade 2</b></p>	<p>Create a bar graph to represent the fruits and vegetables in the picture. (2.MD.D.10)</p>
<p><b>Grade 3</b></p>	<p>The smallest tomato is about 1 inch across. How long does the red pepper look to be? (3.MD.B.4)</p>
<p><b>Grade 4</b></p>	<p>The green basil leaves are about <math>1\frac{1}{2}</math> inches long. About how long would a line of 6 leaves be? (4.MD.A.2)</p>
<p><b>Grade 5</b></p>	<p>The weight of a tomato can vary from 14 grams all the way up to 1.8 kilograms. Find the difference, in grams, between these weights. (5.MD.A.1)</p>



# Talking Math

Day 7



## Launch

What do you know about dominoes?

What questions do you have about dominoes?

**Grade 1**

How many dots are on all of the dominoes in the picture?

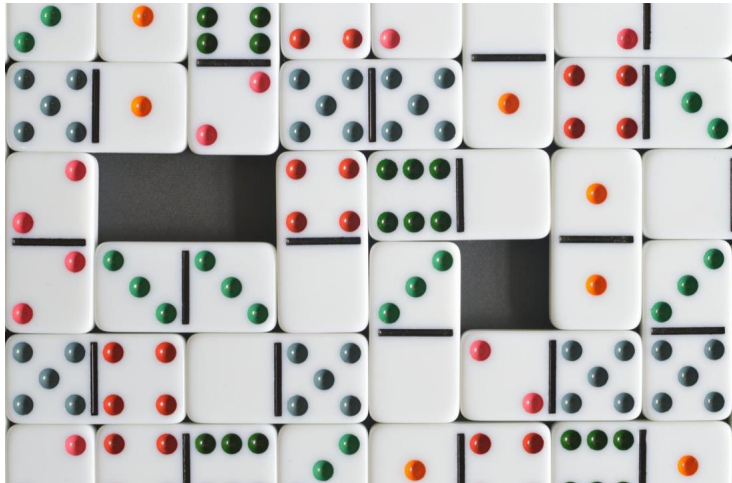






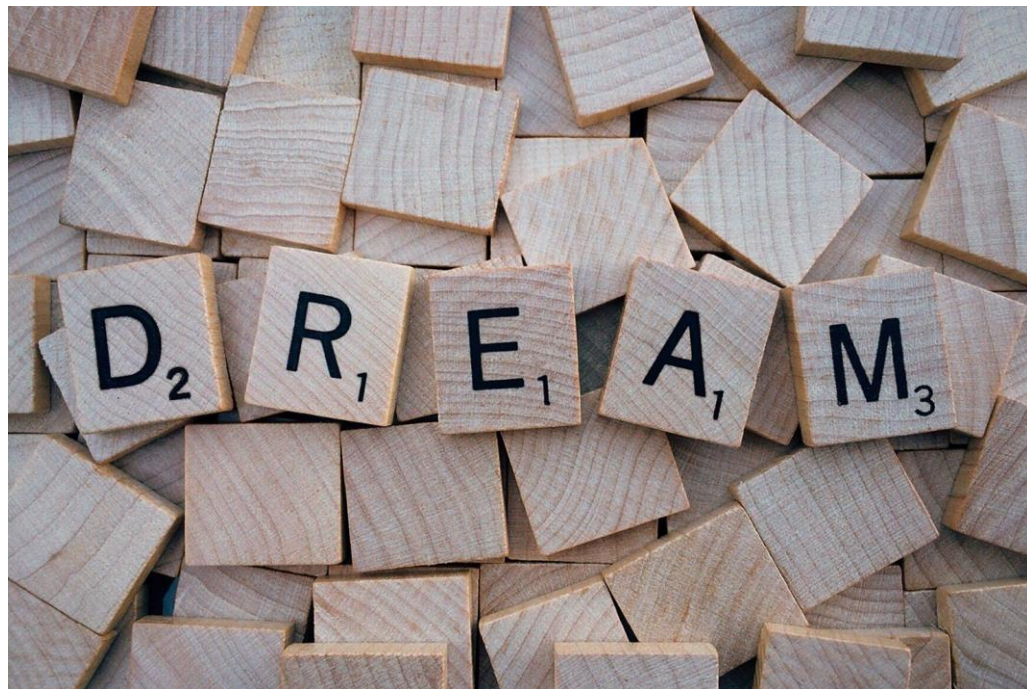
# Talking Math

Day 7



<b>Grade K</b>	Are there more or less than 15 red dots? How do you know? (K.CC.A.3)
<b>Grade 1</b>	How many dots are on all the dominoes? (1.NBT.A.1)
<b>Grade 2</b>	Using the number of dots on the dominoes, can you use addition and subtraction to make 25? 50? 100? Can you make every number between 25 and 100? (2.NBT.B.5)
<b>Grade 3</b>	Using the number of dots on the dominoes, can you use addition, subtraction, multiplication, or division to make 50? 100? What other numbers can you make between 1 and 100? (3.OA.C.7)
<b>Grade 4</b>	Using the number of dots on the dominoes, can you use addition, subtraction, multiplication, or division to make 100? 500? What is the smallest number you can make with 5 dominoes? What is the largest number you can make with 5 dominoes? (4.NBT.B.4, 4.NBT.B.5)
<b>Grade 5</b>	Each domino is about $1\frac{3}{4}$ inch by $\frac{7}{8}$ inch. What is the approximate area, in square inches, of the empty space? (5.NF.B.6)





### Launch

What is another word you can spell with the letters shown?

### Grade 2

Use the digits on the tiles to create 2 numbers with a sum or difference close to 100.





# Talking Math

Day 8



<b>Grade K</b>	The “M” tile has the number 3 on it. Can you start counting at 3 and count up to 42? (K.CC.A.2)
<b>Grade 1</b>	There are about 46 tiles in the picture. Can you start counting at 46 and count up to 120? (1.NBT.A.1)
<b>Grade 2</b>	Use the digits on the tiles to create 2 numbers with a sum or difference close to 100. (2.NBT.B.5)
<b>Grade 3</b>	The “M” tile is worth 3 points. How many 3’s are in 18? How many 3’s are there in 24? (3.OA.B)
<b>Grade 4</b>	Using all of the digits on the tiles, what is the greatest number you can make? Write the number in expanded form. (4.NBT.A.2)
<b>Grade 5</b>	Use all of the digits on the tiles and decimal points to create 2 numbers with a sum or difference close to 2.55. (5.NBT.B.7)





# Talking Math

Day 9



## Launch

What do you notice?  
What do you wonder?

## Grade 4

The full game board is a square with an area greater than 100 square inches, but less than 300 square inches. What could be the length of each side of the game board?





<b>Grade K</b>	How could you sort the game pieces? (K.MD.B.3)
<b>Grade 1</b>	If you used the game pieces to measure the length of your hand, how many do you think it would take? Why? (1.MD.A.2)
<b>Grade 2</b>	Each game piece in the picture is about 1 inch long. If we laid them end to end in a straight line, would the line be longer or shorter than 1 foot? (2.MD.A.3)
<b>Grade 3</b>	Diego played this game from 1:10 PM until 3:05 PM. How long did Diego play the game? (3.MD.A.1)
<b>Grade 4</b>	The full game board is a square with an area greater than 100 square inches, but less than 300 square inches. What could be the length of each side of the game board? (4.MD.A.3)
<b>Grade 5</b>	This game comes in a box with dimensions of 2 inches by 7 inches by 15 inches. What is the volume of the game box? (5.MD.C.5)



### Launch

What math questions could you ask about this picture?

**Grade  
3**

If there are 18 rows of umbrellas, how many umbrellas are there altogether?



<b>Grade K</b>	How many red umbrellas do you see? How many green umbrellas do you see? (K.CC.B.5)
<b>Grade 1</b>	How many white and blue umbrellas do you see? Show or explain your reasoning. (1.OA.C.6)
<b>Grade 2</b>	Is the number of umbrellas in 3 rows odd or even? Explain your thinking. (2.OA.C.3)
<b>Grade 3</b>	If there are 18 rows of umbrellas, how many umbrellas are there altogether? (3.OA.A.3)
<b>Grade 4</b>	Elena wants to copy this umbrella pattern for a party. She bought 128 umbrellas to hang in this pattern. How many rows of umbrellas will she have at her party? (4.NBT.B.6)
<b>Grade 5</b>	There are 10 streets that have this umbrella pattern. If there are 18 rows of umbrellas on each street, how many umbrellas are there altogether? What if there were 100 streets? 1,000 streets? What patterns do you notice in the number of umbrellas? (5.NBT.A.2)



### Launch

What does this picture remind you of?

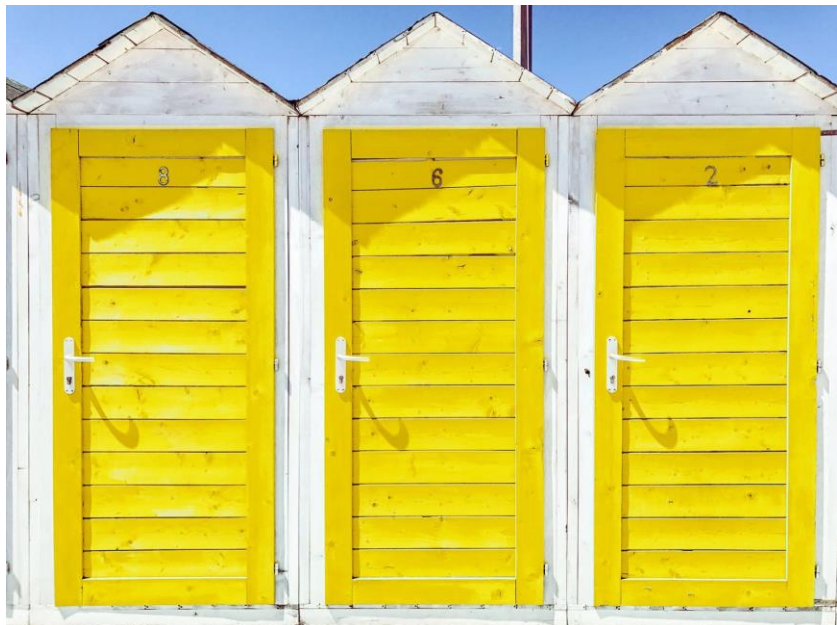
### Grade 5

The world record for most drum beats in one minute is 2,109 beats. How many beats in one second is that?





<p><b>Grade K</b></p>	<p>How many instruments do you see? How did you count? Can you write that number? (K.CC.B.5)</p>
<p><b>Grade 1</b></p>	<p>Priya has some instruments like these. She has 8 drums, 6 xylophones, and 4 shakers. How many instruments does Priya have altogether? Explain or show your reasoning. (1.OA.A.2)</p>
<p><b>Grade 2</b></p>	<p>The world's largest drum set has 340 pieces. What number is 100 more than 340? What number is 10 less than 340? (2.NBT.B.8)</p>
<p><b>Grade 3</b></p>	<p>The world's largest drum set has 340 pieces. What are two numbers that add to 340? What are two numbers that have a difference of 340? (3.NBT.A.2)</p>
<p><b>Grade 4</b></p>	<p>The world record for most drum beats per minute is 2,109 beats. How many beats would that be in 3 minutes? (4.NBT.B.4)</p>
<p><b>Grade 5</b></p>	<p>The world record for most drum beats in one minute is 2,109 beats. How many beats in one second is that? (5.NBT.B.6)</p>



### Launch

Where do you see math in the picture?

### Grade 2

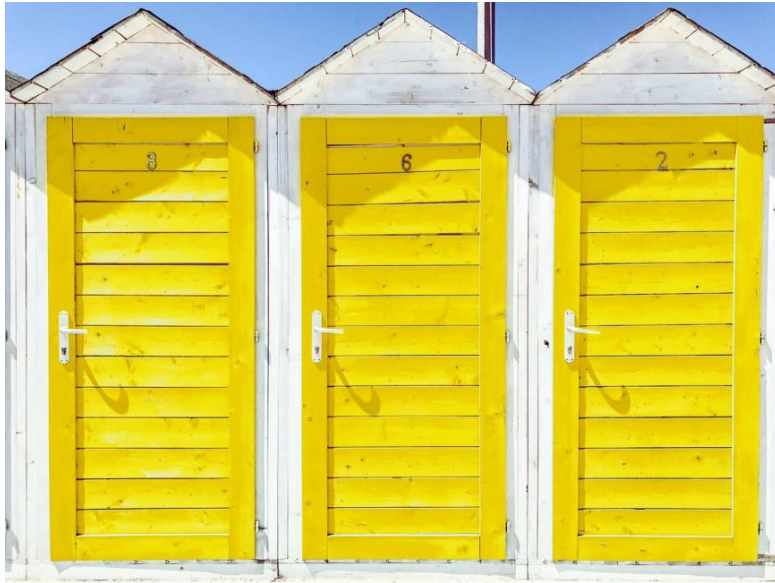
Where would you draw a line to show a third of a door? Can you show a third of the door in a different way?





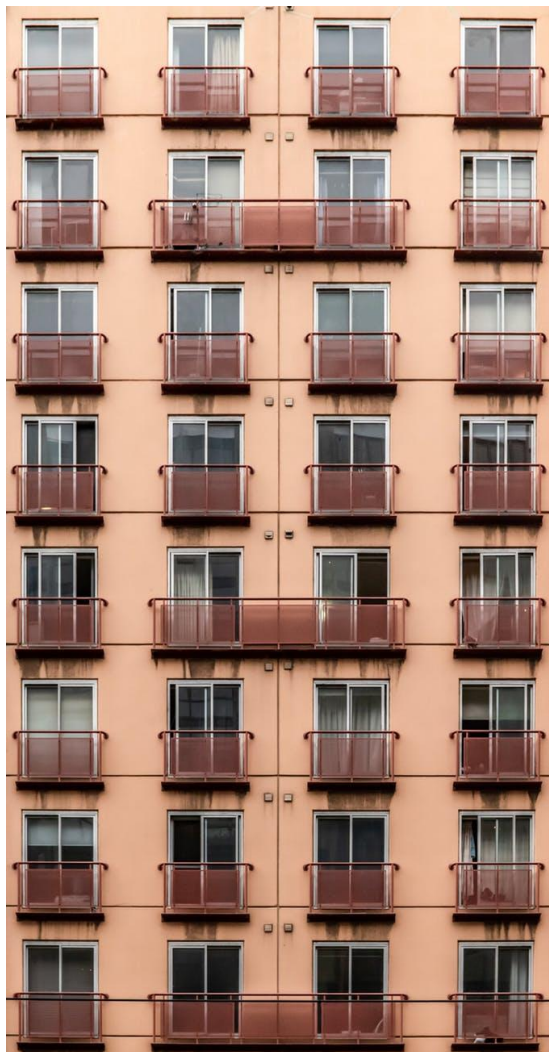
# Talking Math

Day 12



<b>Grade K</b>	Point to objects in the picture that complete these sentences: _____ is next to _____. _____ is above _____. _____ is below _____. (K.G.A.1)
<b>Grade 1</b>	Where would you draw a line to show half of each door? Can you show half of the door in a different way? (1.G.A.3)
<b>Grade 2</b>	Where would you draw a line to show a third of a door? Can you show a third of the door in a different way? (2.G.A.3)
<b>Grade 3</b>	If each yellow door is 8 ft high and 3 ft wide, what is the yellow painted area of each door? What is the area of all 3 doors together? (3.MD.C.7)
<b>Grade 4</b>	Can you identify the following in the picture: line segments, angles (right, acute, obtuse), and perpendicular and parallel lines? (4.G.A.1)
<b>Grade 5</b>	If the board with an 8 on it is about a half foot wide and 2 ft long, what is the area of the inside section of each door? What is the area of all 3 inside door sections? (5.NF.B.6)





### Launch

What patterns do you notice in the picture?

### Grade 1

How many porches do you see in the picture? Write that number. Start at that number and count to 101.



# Talking Math

Day 13



<b>Grade K</b>	How many glass doors do you see in the top two rows? (K.CC.B.5)
<b>Grade 1</b>	How many porches do you see in the picture? Write that number. Start at that number and count to 101. (1.NBT.A.1)
<b>Grade 2</b>	How many glass doors do you see in the top 5 rows? Write an equation to match the array in the top 5 rows. (2.OA.C.4)
<b>Grade 3</b>	Write a multiplication equation to represent the number of glass doors in the picture. (3.OA.A.1)
<b>Grade 4</b>	Each pane of glass in a door is 4 times as tall as it is wide. If the pane of glass is 34 inches wide, how tall, in inches, is it? (4.OA.A.2)
<b>Grade 5</b>	The length of the smaller porch is 72 inches and the width is 36 inches. Find the area, in square inches, of the smaller porch. What do you think the area might be of the larger porch? Why? (5.NBT.B.5)





### Launch

Describe what you think you might see if you walked inside the windmill.

### Grade 5

Name the different types of quadrilaterals in the picture.

How are they the same? How are they different?



<p><b>Grade K</b></p>	<p>What shapes do you see? Can you draw or build the shapes you see? (K.G.A.2, K.G.B.5)</p>
<p><b>Grade 1</b></p>	<p>What shapes do you see? What smaller shapes make up the larger shapes? (1.G.A.2)</p>
<p><b>Grade 2</b></p>	<p>How many rectangles do you see? Where do you see a rectangle broken into smaller squares? (2.G.A.1, 2)</p>
<p><b>Grade 3</b></p>	<p>Where do you see 4-sided shapes in the picture? What are the names of the 4-sided shapes you see? (3.G.A.1)</p>
<p><b>Grade 4</b></p>	<p>Where do you see parallel and perpendicular lines? Where do you see acute, obtuse, and right angles? (4.G.A.1)</p>
<p><b>Grade 5</b></p>	<p>Name the different types of quadrilaterals in the picture. How are they the same? How are they different? (5.G.B.3)</p>



### Launch

What do you notice?

What do you wonder?

**Grade  
3**

Where do you see arrays in the picture? Write a multiplication equation to match each array you see.





<p><b>Grade K</b></p>	<p>How many signs do you see hanging on the treehouse? How many windows do you see in the treehouse? Write the numbers. (K.CC.A.3)</p>
<p><b>Grade 1</b></p>	<p>There are at least 68 different pieces of glass in the treehouse windows. How many tens are in 68? What is 10 more than 68? What is 10 less than 68? Draw a picture to represent the number 68. (1.NBT.B.2, 1.NBT.C.5)</p>
<p><b>Grade 2</b></p>	<p>Where do you see arrays in the picture? Describe them using the words <i>row</i> and <i>column</i>. (2.OA.C.4)</p>
<p><b>Grade 3</b></p>	<p>Where do you see arrays in the picture? Write a multiplication equation to match each array you see. (3.OA.A.3)</p>
<p><b>Grade 4</b></p>	<p>A typical treehouse floor has an area of 80 square feet. What are the possible lengths and widths of a typical treehouse floor? Do you think this treehouse is more or less than 80 square feet? Why? (4.OA.B.4)</p>
<p><b>Grade 5</b></p>	<p>A small treehouse kit costs \$777. It can create a 70 square foot treehouse. How much does each square foot of the treehouse cost? (5.NBT.B.6)</p>



### Launch

What can you count in this picture?

**Grade**  
**2**

Describe the rectangles you see in the picture using the phrases *half of*, *third of*, and *fourth of*.



<p><b>Grade K</b></p>	<p>Describe things you see in the picture using the words <i>above</i>, <i>below</i>, <i>beside</i>, <i>in front of</i>, <i>behind</i>, and <i>next to</i>. (K.G.A.1)</p>
<p><b>Grade 1</b></p>	<p>How many different ways can you describe the shapes you see in the picture? (1.G.A.1)</p>
<p><b>Grade 2</b></p>	<p>Describe rectangles you see in the picture using the phrases <i>half of</i>, <i>third of</i>, and <i>fourth of</i>. (2.G.A.3)</p>
<p><b>Grade 3</b></p>	<p>If the dimensions of each rectangle is 10 inches by 6 inches, what is the area of each rectangle in the sign? What is the perimeter of each rectangle? (3.MD.C.7 and 3.MD.D.8)</p>
<p><b>Grade 4</b></p>	<p>Describe the angles you see in the letters M and E in the picture. How many, or about how many, degrees is each angle? (4.G.A.1)</p>
<p><b>Grade 5</b></p>	<p>If the entire sign is 48 inches tall and 156 inches long, what is its area in square feet? What is the perimeter in inches? (5.MD.A.1)</p>



### Launch

What questions can you ask about the picture?

### Grade 4

Priya got on the wheel at the bottom for a ride. The wheel moved 45 degrees and stopped.

What is her approximate location in the picture?



<p><b>Grade K</b></p>	<p>What shapes do you see in the picture? Where do you see them? (K.G.A.2)</p>
<p><b>Grade 1</b></p>	<p>Show how you could split the wheel to make halves. Show how you could make fourths. (1.G.A.3)</p>
<p><b>Grade 2</b></p>	<p>Show how you could split the wheel to make halves. Show how you could make thirds? (2.G.A.3)</p>
<p><b>Grade 3</b></p>	<p>Each revolution of the wheel takes 30 minutes. If a person started riding at 9:45 am and rode 3 consecutive times, what time would they get off the wheel? (3.MD.A.1)</p>
<p><b>Grade 4</b></p>	<p>Priya got on the wheel at the bottom for a ride. The wheel moved 45 degrees and stopped. What is her approximate location in the picture? (4.MD.C.5)</p>
<p><b>Grade 5</b></p>	<p>The height of the wheel is 135 meters. About how many meters high is the tallest building in the picture? the shortest building? Explain or show your reasoning. (5.NF.7)</p>



### Launch

What questions could you answer about the picture?

**Grade K**

Describe objects in the picture using the words *beside*, *in front of*, *behind*, and *next to*.



<b>Grade K</b>	Describe objects in the picture using the words <i>beside</i> , <i>in front of</i> , <i>behind</i> , and <i>next to</i> . (K.G.A.1)
<b>Grade 1</b>	How might you sort the vehicles into 2 categories? How many vehicles would be in each category? (1.MD.C.4)
<b>Grade 2</b>	Which tool would you use to measure the length of a car: a ruler, a meter stick or a tape measure? Why would you use that tool? (2.MD.A.1)
<b>Grade 3</b>	Would the amount of gasoline in a car be measured in grams, kilograms, or liters? What other amounts would be measured in liters? (3.MD.A.2)
<b>Grade 4</b>	If a car has 5 liters of gasoline in its tank, how many milliliters is that? (4.MD.A.1)
<b>Grade 5</b>	The length of the yellow car is about 3821 mm, is this more or less than 4 meters? How do you know? (5.MD.A.1)

**Launch**

What questions can you ask about the picture?

**Grade 1**

How many more gloves are needed for there to be 20 gloves? Write an equation to match your thinking.





# Talking Math

Day 19



<b>Grade K</b>	Count the number of gloves in the picture. Create a group of objects with that same number of things. (K.CC.B.5)
<b>Grade 1</b>	How many more gloves are needed for there to be 20 gloves? Write an equation to match your thinking. (1.OA.A.1)
<b>Grade 2</b>	Is the number of gloves odd or even? How do you know? (2.OA.C.3)
<b>Grade 3</b>	Write as many multiplication equations as you can to match something in the picture. (3.OA.A.1)
<b>Grade 4</b>	Is the number of gloves prime or composite? How do you know? (4.OA.B.4)
<b>Grade 5</b>	Explain where you see the equation $9 \times 2 \times 5 = 9 \times 10$ in the picture. (5.OA.2)





### Launch

What does the picture remind you of?

### Grade 5

Estimate the volume of one of the boxes in the picture. Explain or show your reasoning.



<p><b>Grade K</b></p>	<p>How many different fruits and vegetables do you see? (K.MD.B.3)</p>
<p><b>Grade 1</b></p>	<p>Describe how the fruits and vegetables are sorted into groups. (1.MD.C.4)</p>
<p><b>Grade 2</b></p>	<p>Andre says a chili pepper is about 3 inches long. Jada says a chili pepper is about 8 centimeters long. Can they both be right? Explain your reasoning. (2.MD.B.2)</p>
<p><b>Grade 3</b></p>	<p>A typical tomato weighs 123 grams. How much would 5 tomatoes weigh?</p> <p>A typical serrano pepper weighs 6 grams. If there are 75 peppers in a box, how much does the box weigh? (3.MD.A.2)</p>
<p><b>Grade 4</b></p>	<p>A large head of cabbage can weigh <math>2\frac{1}{2}</math> pounds. How many ounces is that? (4.MD.A.1)</p>
<p><b>Grade 5</b></p>	<p>Estimate the volume of one of the boxes in the picture. Explain or show your reasoning. (5.MD.C.5)</p>



### Launch

What do you notice?

What do you wonder?

### Grade 3

What shapes do you see in the picture?  
Draw the shapes and divide them into parts with equal areas. Explain how you know the parts have equal areas.



<p><b>Grade K</b></p>	<p>What shapes do you see in the picture? What is the same about the shapes? What is different? (K.G.A.2 and K.G.B.4)</p>
<p><b>Grade 1</b></p>	<p>What shapes do you see in the picture? Draw the shapes and show halves and fourths on the shapes. (1.G.A.3)</p>
<p><b>Grade 2</b></p>	<p>What shapes do you see in the picture? Draw the shapes and show halves, thirds, and fourths on the shapes. (2.G.A.3)</p>
<p><b>Grade 3</b></p>	<p>What shapes do you see in the picture? Draw the shapes and divide them into parts with equal areas. Explain how you know the parts have equal areas. (3.G.A.2)</p>
<p><b>Grade 4</b></p>	<p>If the area of the rectangular bottom of a birdhouse is 35 square inches and the width is 5 inches, what is the length of the bottom of the birdhouse? Show or explain your reasoning. (4.MD.A.3)</p>
<p><b>Grade 5</b></p>	<p>Use the information in the grade 4 question to estimate the volume of the birdhouse. What is a volume that would be too low? Too high? Just about right? (5.MD.C.5)</p>



Community Photo  
Photo credit: [Marnie Penney](#)

**Launch:** Tell a story about what happened before this picture was taken.

## Grade 4

Use the picture to complete the following sentences in as many ways as you can:

There are 2 times as many \_\_\_\_\_ than \_\_\_\_\_.

There are \_\_\_ times as many \_\_\_\_\_ than \_\_\_\_\_.



<p><b>Grade K</b></p>	<p>Use the picture to complete the following sentences:          There are more _____ than _____.          There are less _____ than _____. (K.MD.A.2)</p>
<p><b>Grade 1</b></p>	<p>The animals are sorted into 2 categories. What could the 2 categories be? What is another way you could sort them? Explain or show your reasoning. (1.MD.C.4)</p>
<p><b>Grade 2</b></p>	<p>Create a picture graph or bar graph to represent the animals in the picture. Ask someone a question that can be answered using the graph. (2.MD.D.10)</p>
<p><b>Grade 3</b></p>	<p>How many ways could you count the total number of animal legs in the picture? Can you write a multiplication equation to match the ways you counted? (3.OA.A.3)</p>
<p><b>Grade 4</b></p>	<p>Use the picture to complete the following sentences in as many ways as you can:          There are 2 times as many _____ than _____.          There are ___ times as many _____ than _____.          (4.OA.A.1)</p>
<p><b>Grade 5</b></p>	<p>How does this multiplication expression represent the number of legs in the picture: <math>(10 \times 4) + (6 \times 2)</math>? If there were 3 more birds and 2 more foxes, how would the expression change? (5.OA.A.2)</p>



### Launch

Describe what you see in the picture in as much detail as you can.

About what fraction of the pancake stack is on the fork?

### Grade 5

If you ate half of what was on the fork, how much of the pancake stack would be eaten? Explain or show your reasoning.





<b>Grade K</b>	How many pancakes do you see in the picture? (K.CC.B.5)
<b>Grade 1</b>	If 8 more pancakes were put on the plate, how many pancakes would there be then? (1.OA.2)
<b>Grade 2</b>	Do you see an even or an odd number of pancakes in the picture? Explain or show your reasoning. (2.OA.C.3)
<b>Grade 3</b>	About what fraction of the pancake stack is on the fork? What fraction is left in the stack? (3.NF.A.1)
<b>Grade 4</b>	About what fraction of the pancake stack is on the fork? If you ate 6 bites of the same size, how much of the stack would be eaten? Explain or show your reasoning. (4.NF.B.4)
<b>Grade 5</b>	About what fraction of the pancake stack is on the fork? If you ate half of what was on the fork, how much of the pancake stack would be eaten? Explain or show your reasoning. (5.NF.B.4)



### Launch

What questions do you have about the picture?

### Grade 1

A player rolls 2 balls down the lane, one at a time.  
List 5 possible total scores the player could get.





This game is called Skeeball.

In this game each player rolls a ball down the lane and the ball hops into one of the numbered holes.

The number the ball goes into is the amount of points the player gets.

<b>Grade K</b>	How many different scores are possible? Show how you counted the scores on the picture. (K.CC.B.5)
<b>Grade 1</b>	A player rolls 2 balls down the lane, one at a time. List 5 possible total scores the player could get. (1.NBT.C.4)
<b>Grade 2</b>	A player rolls 5 balls down the lane, one at a time. What is the highest possible score? What is the lowest possible score? What score could the player have if none of the balls hop in the same hole? (2.NBT.B.7)
<b>Grade 3</b>	A player plays 2 rounds of Skeeball. In each round, they roll 5 balls. List 5 possible scores the player could have after the 2 rounds. (3.NBT.A.2)
<b>Grade 4</b>	A player plays 4 rounds of Skeeball. The total score after those 4 rounds is 2,680. If the player scored the same amount of points each round, how many points did they score in each of the 4 rounds? Explain or show your reasoning. (4.NBT.B.6)
<b>Grade 5</b>	A standard game of Skeeball is 12 rounds with 9 balls in each round. What rolls would create a score of 1320 after 3 rounds? Write an equation to represent the rolls and the score.  Based on the first 3 rounds, what might be the final score of this game? Explain or show your reasoning. (5.OA.A.1)



### Launch

What could you count in the picture?

How would you count them?

**Grade  
4**

How does this picture show that 10 is a multiple of 2?  
How does this picture show that 5 is a factor of 35?  
How does the picture show that 70 is a multiple of 10?





# Talking Math

Day 25



<b>Grade K</b>	How many pairs of shoes are in the bottom row? Write the number. (K.CC.A.3)
<b>Grade 1</b>	There are 70 shoes in all. How many shoes would there be if another full row of shoes was added? Explain or show your reasoning. (1.NBT.C.4)
<b>Grade 2</b>	Is the number of shoes in the bottom row of the shelf odd or even? Explain or show your reasoning. (2.OA.C.3)
<b>Grade 3</b>	Each space that holds a pair of shoes is called a cubby. How many shoe cubbies are in the picture? Write an equation to match your thinking. (3.OA.A.3)
<b>Grade 4</b>	How does this picture show that 10 is a multiple of 2? How does this picture show that 5 is a factor of 35? How does the picture show that 70 is a multiple of 10? (4.OA.B.4)
<b>Grade 5</b>	How does this multiplication expression represent the number of shoes in the picture: $(7 \times 2) \times 5$ ? If there were 3 more rows added that had 4 shoes in each cubby, how would the expression change? (5.OA.A.2)





### Launch

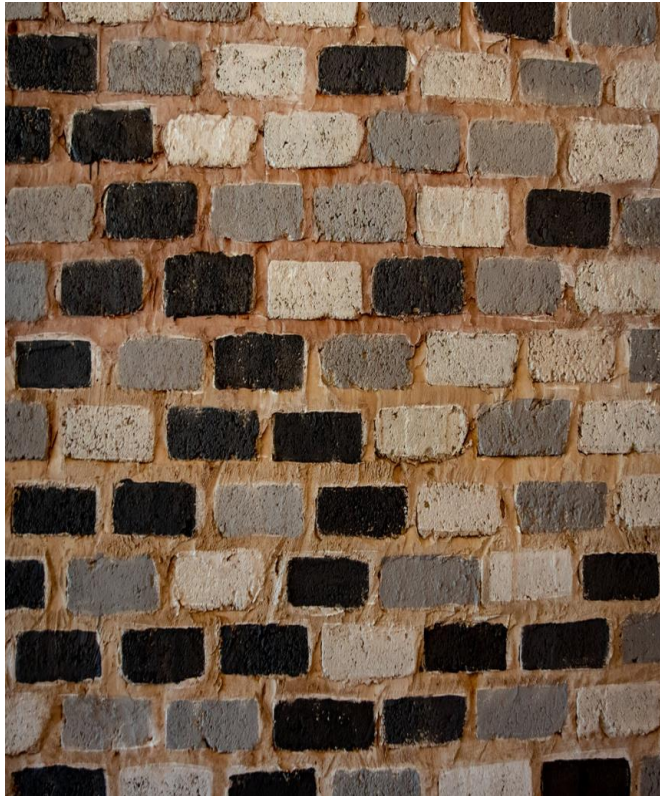
What could you count in this picture?

How would you count them?

### Grade K

How could you describe a brick in the picture?

What about the brick could you measure?



<b>Grade K</b>	How could you describe a brick in the picture? What about the brick could you measure? (K.MD.A.1)
<b>Grade 1</b>	A brick can be about as long as your foot. Find something around you that is longer than your foot. Find something that is shorter than your foot. (1.MD.A.1)
<b>Grade 2</b>	Do you think a brick would be about 9 centimeters, 9 inches or 9 feet long? How do you know? (2.MD.A.3)
<b>Grade 3</b>	Do you think a brick would most likely weigh about 2 grams or 2 kilograms? How do you know? (3.MD.A.2)
<b>Grade 4</b>	A standard brick weighs about 5 pounds. A pound is equivalent to 16 ounces. What is the weight, in ounces, of a standard brick? (4.MD.A.1)
<b>Grade 5</b>	A standard brick for building is 8 inches by $2\frac{1}{4}$ inches by 4 inches. Find the volume of a standard brick. (5.MD.C.5)



### Launch

These are solar panels.

What do you notice about them?

What do you wonder about them?

### Grade 2

Choose a solar array in the picture to sketch.  
How many rows and columns does it have?

Write an equation to represent the number of panels in the array you sketched.





These are solar panels.

They use the sun's light or heat to create electricity.

<p><b>Grade K</b></p>	<p>Are there more than 20 solar panels in the picture? Show how you know. (K.CC.B.5)</p>
<p><b>Grade 1</b></p>	<p>One of the solar arrays has 36 panels. Another solar array has 28 panels. Use <math>&lt;</math> or <math>&gt;</math> to compare 36 and 28. (1.NBT.A.3)</p>
<p><b>Grade 2</b></p>	<p>Choose a solar array in the picture to sketch. How many rows and columns does it have? Write an equation to represent the number of panels in the array you sketched. (2.OA.C.4)</p>
<p><b>Grade 3</b></p>	<p>Choose two different solar arrays to sketch. Write an equation to represent the number of panels in each array. What is the same about your equations? What is different? (3.OA.A.3)</p>
<p><b>Grade 4</b></p>	<p>What pattern(s) do you see in the solar panels? Now that you have noticed some patterns in the solar panels, do you think a solar panel array would be more likely to have 50, 55, or 72 panels? Why? (4.OA.C.5 and 4.OA.A.4)</p>
<p><b>Grade 5</b></p>	<p>A standard 60-cell solar panel is <math>3\frac{1}{4}</math> feet wide and <math>5\frac{1}{2}</math> feet long. What is the area of this solar panel? (5.NBT.B.6)</p>



# Talking Math

Day 28



## Launch

What words can you spell with the tiles on the table?

**Grade 4**

In the word "LAW", which letters have a line of symmetry? Which do not? Show how you know.





<b>Grade K</b>	How many circles do you see? (K.G.B.2)
<b>Grade 1</b>	What shapes do you see? What smaller shapes make up the larger shape? (1.G.A.2)
<b>Grade 2</b>	A game tile is 1 inch long on each side. If we measured a game tile in centimeters, would you expect it to be more or less than 1 centimeter? Why? (2.MD.A.2)
<b>Grade 3</b>	Each game tile is a square inch. If you put all the tiles in this photo together to make a figure, what would its area be? What might this figure look like? (3.MD.C.5)
<b>Grade 4</b>	In the word "LAW", which letters have a line of symmetry? Which do not? Show how you know. (4.G.A.3)
<b>Grade 5</b>	Name some attributes of the tile's shape. Can you think of at least 5 geometric names for the shape of a tile? (5.G.B.3)



### Launch

What questions could you ask someone to answer about the picture?

**Grade  
K**

What do you see the most of in the picture? What do you see the least of in the picture?

Complete the sentences based on the picture:

I see more than 10 \_\_\_\_\_.

I see less than 5 \_\_\_\_\_.





<b>Grade K</b>	<p>What do you see the most of in the picture? What do you see the least of in the picture?</p> <p>Complete the sentences based on the picture: I see more than 10 _____. I see less than 5 _____. (K.CC.C.6)</p>
<b>Grade 1</b>	<p>Jada had 14 tulips in her yard. She put some tulips in a vase and then 6 were left in her yard. How many tulips did Jada put in the vase? (1.OA.A.1)</p>
<b>Grade 2</b>	<p>A flower farm grew 529 tulips. The farm sold 100 tulips on Sunday. How many tulips were left on the farm? On Monday the farm sold 10 tulips. How many tulips were left on the farm? (2.NBT.B.8)</p>
<b>Grade 3</b>	<p>A flower farm grew 529 tulips. What is 529 rounded to the nearest ten? To the nearest hundred? (3.NBT.A.1)</p>
<b>Grade 4</b>	<p>A flower farm grew 529 tulips. A garden center grew 678 tulips. Find the total number of tulips grown and write the total in words and in expanded form. (4.OA.A.3 and 4.NBT.A.2)</p>
<b>Grade 5</b>	<p>Tulips can be shipped in 58 pallets per truck. Each full pallet contains 18 crates of 100 un-sprouted bulbs and 6 crates of 60 sprouted bulbs. Write and evaluate a mathematical expression to represent the truck load of tulip bulbs. (5.OA.A.2)</p>



### Launch

Describe what you know about this picture.

What questions do you have about the picture?

**Grade**  
**3**

Choose a shape you see in the picture and write 2 sentences that describe the shape in as much detail as you can.



<p><b>Grade K</b></p>	<p>What shapes do you see in the picture? (K.G.A.1)</p>
<p><b>Grade 1</b></p>	<p>Choose a shape to sketch from the picture. Draw a line to split your shape into 2 equal parts. What words describe each equal part? (1.G.A.3)</p>
<p><b>Grade 2</b></p>	<p>Choose a shape to sketch from the picture. Draw a line to partition your shape into 3 equal parts. What words describe each equal part? (2.G.A.3)</p>
<p><b>Grade 3</b></p>	<p>Choose a shape from the picture and write 2 sentences that describe the shape in as much detail as you can. (3.G.A.1)</p>
<p><b>Grade 4</b></p>	<p>Choose a shape to sketch from the picture. Draw any lines of symmetry it has. (4.G.A.3)</p>
<p><b>Grade 5</b></p>	<p>Choose a quadrilateral to sketch from the picture. What other quadrilaterals share characteristics with the shape you drew? (5.G.B.3)</p>



### Launch

Tell a story of what happened just before this picture was taken.

**Grade  
4**

The largest colored pencil drawing ever documented is 500 yards long. How many feet is that? Show or explain your reasoning.







<p><b>Grade K</b></p>	<p>Point to or use the colors in the picture to complete the sentences.          The _____ pencil is longer than the _____ pencil.          The _____ pencil is shorter than the _____ pencil.          (K.MD.A.2)</p>
<p><b>Grade 1</b></p>	<p>Show 3 pencils in the picture that are in order by their length from shortest to longest. (1.MD.A.1)</p>
<p><b>Grade 2</b></p>	<p>Which tool would you use to measure the length of a pencil: a ruler, a yardstick or a meter stick? Why would you use that tool? (2.MD.A.1)</p>
<p><b>Grade 3</b></p>	<p>If the shortest pencil in the picture is a half inch, how long do you think some of the other pencils are? Explain or show your reasoning. (3.MD.B.4)</p>
<p><b>Grade 4</b></p>	<p>The largest colored pencil drawing ever documented was 500 yards long. How many feet is that? (4.MD.A.2)</p>
<p><b>Grade 5</b></p>	<p>The largest colored pencil is located in the Pencil Museum in Cumbria. It weighs 984.05 pounds. How much would 2 of those pencils weigh? (5.NBT.B.7)</p>

**Launch**

What questions could you answer about this picture?

**Grade  
1**

*From Paige and Grace:*

If you give the middle vase of flowers away to a friend, how many flowers would be left?



Sending a big THANK YOU to the students in Mrs. Welch's class, Colby, Oliver, Sofia, Gavin, Paige, Jordan, Syd, Michael, and Grace, who submitted both the photo and the questions for today's post! Keep sharing all of the wonderful math you are doing!

~ Kristin

<p><b>Grade K</b></p>	<p><i>From Sofia:</i> How many flowers are there in the picture? (K.CC.B.5)</p>
<p><b>Grade 1</b></p>	<p><i>From Paige and Grace:</i> If you give the middle vase of flowers away to a friend, how many flowers would be left? (1.OA.A.1)</p>
<p><b>Grade 2</b></p>	<p><i>From Syd:</i> Is the number of flowers odd or even? How do you know?</p> <p><i>From Gavin:</i> If the vase is 5 inches tall, estimate the height of one of the flowers. (2.OA.C.3, 2.MD.A.3)</p>
<p><b>Grade 3</b></p>	<p><i>From Jordan:</i> Each flower has 6 petals. How many petals are there in all? Write an equation that matches your thinking. (3.OA.A.3)</p>
<p><b>Grade 4</b></p>	<p><i>From Michael:</i> Write and solve a division word problem about the picture. (4.OA.A.3)</p>
<p><b>Grade 5</b></p>	<p><i>From Colby and Oliver:</i> If each vase of flowers with water weighs 7 ounces, how many pounds do the vases weigh in total? (5.MD.A.1)</p>



## Launch

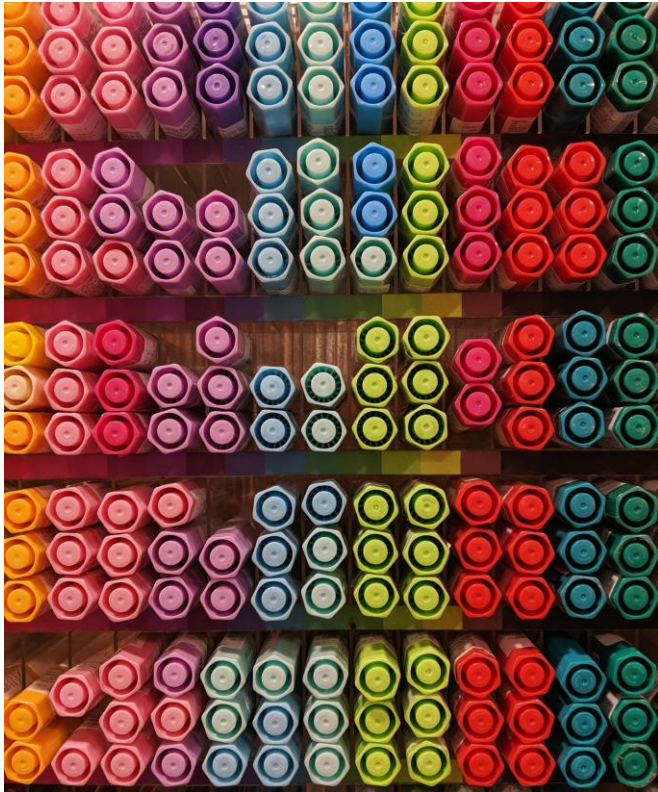
What math words do you think of when you look at this picture?

## Grade 5

If each cardboard box is 22 cm by 15 cm by 5 cm, what is the volume of one box?



<b>Grade K</b>	What shapes do you see in the picture? Where do you see them? How many do you see? (K.G.A.2)
<b>Grade 1</b>	What shapes in the picture could you put together to make a different shape? (1.G.A.2)
<b>Grade 2</b>	How many rectangles do you see? Describe each rectangle in as much detail as possible. (2.G.A.1)
<b>Grade 3</b>	Describe how you might find the area and perimeter of one of the rectangles in the picture. (3.MD.C.6)
<b>Grade 4</b>	Where do you see parallel and perpendicular lines in the picture? What kind of angles do you see? (4.G.A.1)
<b>Grade 5</b>	If each cardboard box is 22 cm by 15 cm by 5 cm, what is the volume of one box? (5.MD.C.5)

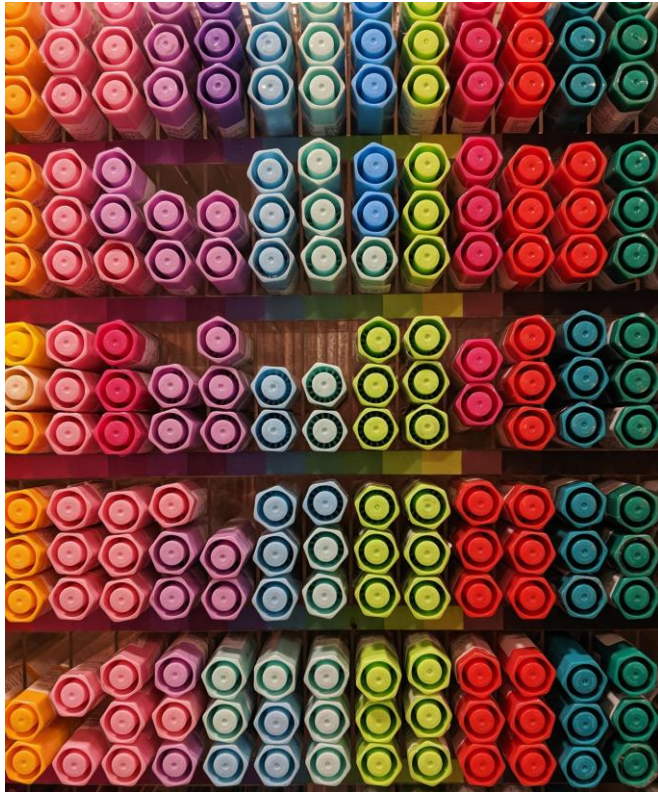
**Launch**

Describe any patterns you see in the picture.

**Grade  
2**

Show where you see arrays in the picture.

Choose an array and describe to friend or family member. See if they can find your array in the picture.



<p><b>Grade K</b></p>	<p>Where do you see groups of 2 in the picture? Where do you see 3? Where do you see 4? Where do you see 5? Show where you see other numbers in the picture. (K.OA.A.3)</p>
<p><b>Grade 1</b></p>	<p>Priya said she sees <math>4 + 6 + 5</math> when she looks at the markers. Where might Priya see the markers that match that expression? (1.OA.A.2)</p>
<p><b>Grade 2</b></p>	<p>Show where you see arrays in the picture. Choose an array and describe to friend or family member. See if they can find your array in the picture. (2.OA.C.4)</p>
<p><b>Grade 3</b></p>	<p>Record 5 multiplication equations that represent some of the markers in the picture. Record 5 division equations that represent some of the markers in the picture. (3.OA.A.3)</p>
<p><b>Grade 4</b></p>	<p>Use the picture to show that 3 is a factor of 12. Use the picture to show that 24 is a multiple of 6. Where do you see other factor and multiple relationships in the picture? (4.OA.B.4)</p>
<p><b>Grade 5</b></p>	<p>Complete this expression in as many ways as you can based on the grouping of markers in the picture:  <math>( \quad \times \quad ) + ( \quad \times \quad ) = \quad</math> (5.OA.A.1)</p>



### Launch

What does this picture remind you of?

What questions do you have about the picture?

**Grade  
1**

In 2019, a 10-year-old girl named Selah became the youngest person to climb the mountain. Are you older or younger than Selah? By how many years?

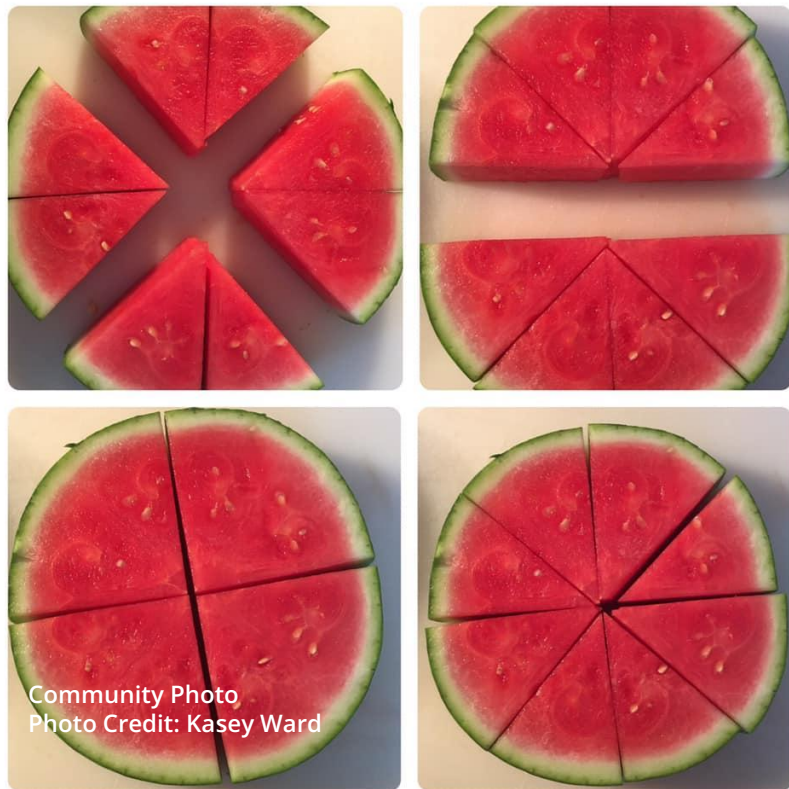






This is El Capitan, one of the most famous rock climbing walls in the world, in Yosemite National Park, CA. The mountain is about 3,600 feet high.

<b>Grade K</b>	How many trees can you count in the picture? (K.CC.B.5)
<b>Grade 1</b>	In 2019, a 10-year-old girl named Selah became the youngest person to climb the mountain. Are you older or younger than Selah? By how many years? (1.OA.C.6)
<b>Grade 2</b>	People climbing El Capitan need to bring water to drink. The water for one person weighs about 24 lbs. How much will water for two people weigh? (2.OA.1)
<b>Grade 3</b>	The fastest climb of El Capitan was about 2 hours and 24 minutes by Alex Honnold and Hans Florine in 2012. How many minutes was their climb? (3.NBT.A.2)
<b>Grade 4</b>	The Freedom Tower in New York City is 1,776 feet high. How many feet higher is the mountain El Capitan?  The Burj Khalifa is the tallest building in the world at 2,717 feet. How many feet higher is the mountain El Capitan? (4.NBT.B.4)
<b>Grade 5</b>	On June 3, 2017, Alex Honnold climbed one mountain route in about 4 hours. If he climbed almost the same distance each hour, how many feet did Alex climb in the first hour? (5.NBT.B.6)



### Launch

What do you notice?

What do you wonder?

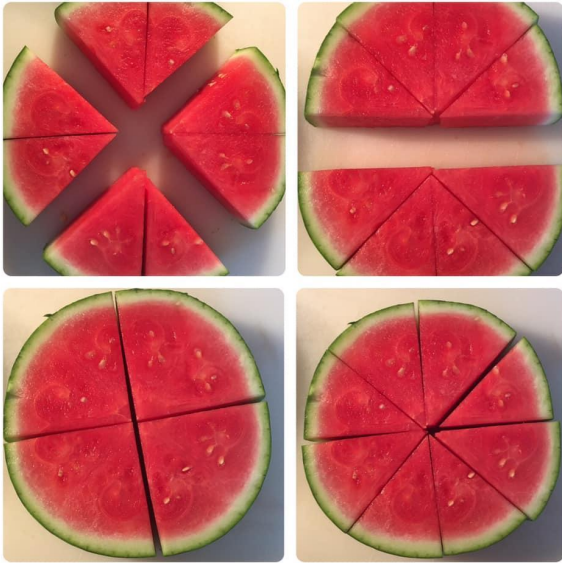
**Grade**

**1**

Where do you see halves in the picture?

Where do you see fourths in the picture?





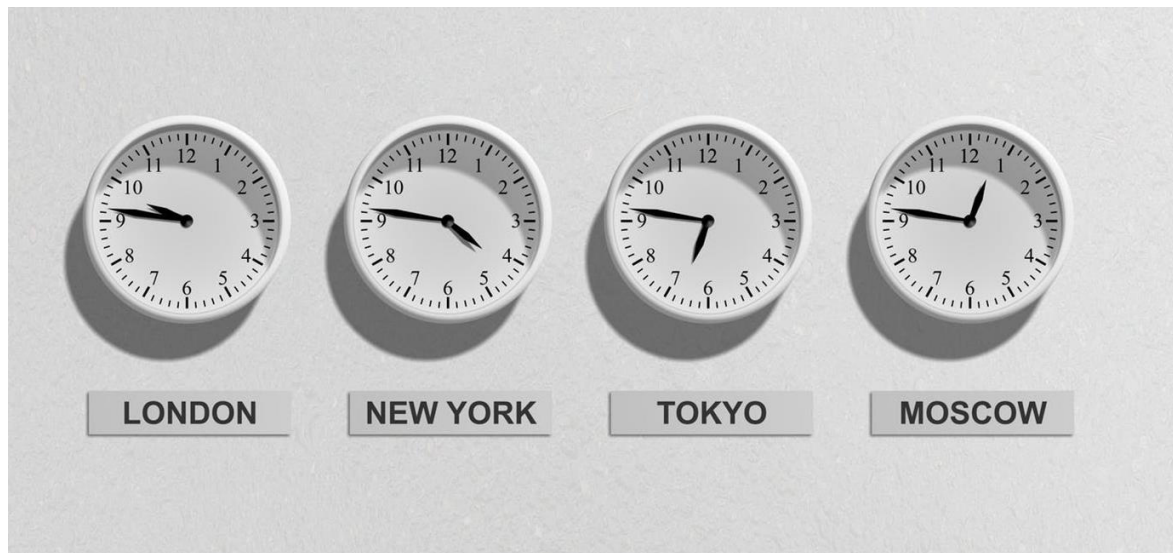
Thank you to Kasey Anderson Ward for submitting this photo!

<b>Grade K</b>	Which picture has the fewest number of watermelon slices? How many slices does it have? (K.CC.C.6)
<b>Grade 1</b>	Where do you see halves in the picture? Where do you see fourths in the picture? (1.G.A.3)
<b>Grade 2</b>	Sketch a circle to represent a watermelon. Draw lines to show thirds. (2.G.A.3)
<b>Grade 3</b>	How many fourths are in all four pictures altogether? How many eighths are in in all four pictures? Show or explain your reasoning. (3.NF.A.1)
<b>Grade 4</b>	What equivalent fractions do you see represented in the picture? Record them and explain how you know they are equivalent. (4.NF.A.1)
<b>Grade 5</b>	At a watermelon eating contest each contestant was given half a watermelon. If Jada ate $\frac{2}{5}$ of her half, how much of the whole watermelon did Jada eat? (5.NF.B.4)



# Talking Math

Day 37



## Launch

What math questions could you ask about this picture?

**Grade 3**

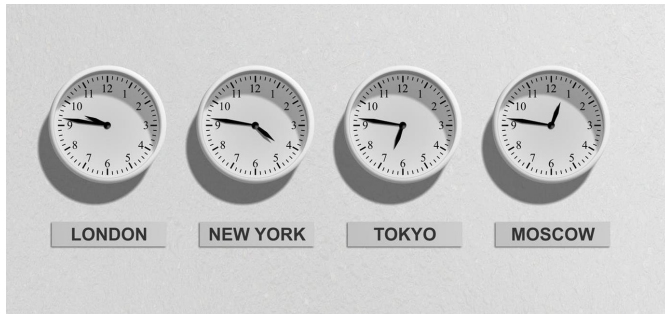
Based on the clock, what time will it be in London 20 minutes from now?





# Talking Math

Day 37



<b>Grade K</b>	How many clocks would need to be added to the wall so there were 10 clocks in all? (K.OA.A.4)
<b>Grade 1</b>	Do any of these clocks show times to the half hour? Show or explain your reasoning. (1.MD.B.3)
<b>Grade 2</b>	Are these clocks closer to 35 minutes past the hour or 45 minutes past the hour? Show or explain your reasoning. (2.MD.C.7)
<b>Grade 3</b>	Based on the clocks, what time will it be in London 20 minutes from now? (3.MD.A.1)
<b>Grade 4</b>	Based on the clocks, what time was it $3\frac{1}{2}$ hours ago in Tokyo? (4.MD.A.2)
<b>Grade 5</b>	A <i>centisecond</i> is 0.01 of a second. How many centiseconds are in 10 minutes? In 30 minutes? In 1 hour? (5.NBT.A.2)





## Launch

Tell a story about the picture.

Community Photo  
Photo Credit: Kasey War

**Grade**  
**4**

A group of penguins on land is called a *rookery*. Some penguin rookeries can be 700 times as large as the group in this photo. How many penguins would be in that rookery?



<b>Grade K</b>	How many penguins are in the picture? Write the number. Is the number of penguins more than 9? (K.CC.B.5 and K.CC.C.7)
<b>Grade 1</b>	If the 5 largest penguins go in the water, how many penguins would be left on the sand? (1.OA.A.1)
<b>Grade 2</b>	These penguins are on the beach. Later in the day, more penguins come to join them. Now there are 32 penguins on the beach. How many penguins joined? Show or explain your reasoning. (2.OA.A.1)
<b>Grade 3</b>	If there were 5 more groups of penguins this size on the beach, how many penguins would there be on the beach? (3.OA.A.3)
<b>Grade 4</b>	A group of penguins on land is called a <i>rookery</i> . Some penguin rookeries can be 700 times as large as the group in this photo. How many penguins would be in that rookery? (4.OA.A.2)
<b>Grade 5</b>	A group of penguins on land is called a <i>rookery</i> . Penguin rookeries can range in size from $5 \times 10^3$ to $7 \times 10^3$ penguins. Does the number 678 fall in this range? Explain how you know. (5.NBT.A.2)

**Launch**

What patterns do you notice in the picture?

**Grade**  
**5**

Each folded piece of fabric costs \$14.85. If Andre has \$90 to spend on fabric, does he have enough money to buy 6 folded pieces? Show or explain your reasoning.





<p><b>Grade K</b></p>	<p>How many folded pieces of fabric are in the top row? Write the number. (K.CC.B.5 and K.CC.A.3)</p>
<p><b>Grade 1</b></p>	<p>There are 20 folded pieces of fabric in the bottom row. If Andre uses 6 bolts of the fabric for a sewing project, how many bolts would be left in the bottom row? Write an equation to represent your thinking. (1.OA.A.1)</p>
<p><b>Grade 2</b></p>	<p>There are 33 folded pieces of fabric in the picture. They were taken from a storeroom that had 91 folded pieces of fabric. How many folded pieces of fabric are left in the storeroom? (2.NBT.B.5)</p>
<p><b>Grade 3</b></p>	<p>Each folded piece of fabric is about 30 yards long. How many yards of fabric are in 7 of the folded pieces? (3.NBT.A.3)</p>
<p><b>Grade 4</b></p>	<p>Mai is making costumes that need 9 square inches of colorful fabric for trim. If one folded piece of fabric is 8,640 square inches, how many costumes can Mai trim with one folded piece of fabric? (4.NBT.B.6)</p>
<p><b>Grade 5</b></p>	<p>Each folded piece of fabric costs \$14.85. If Andre has \$90 to spend on fabric, does he have enough money to buy 6 folded pieces? Explain how you know. (5.NBT.A.4 and 5.NBT.B.7)</p>



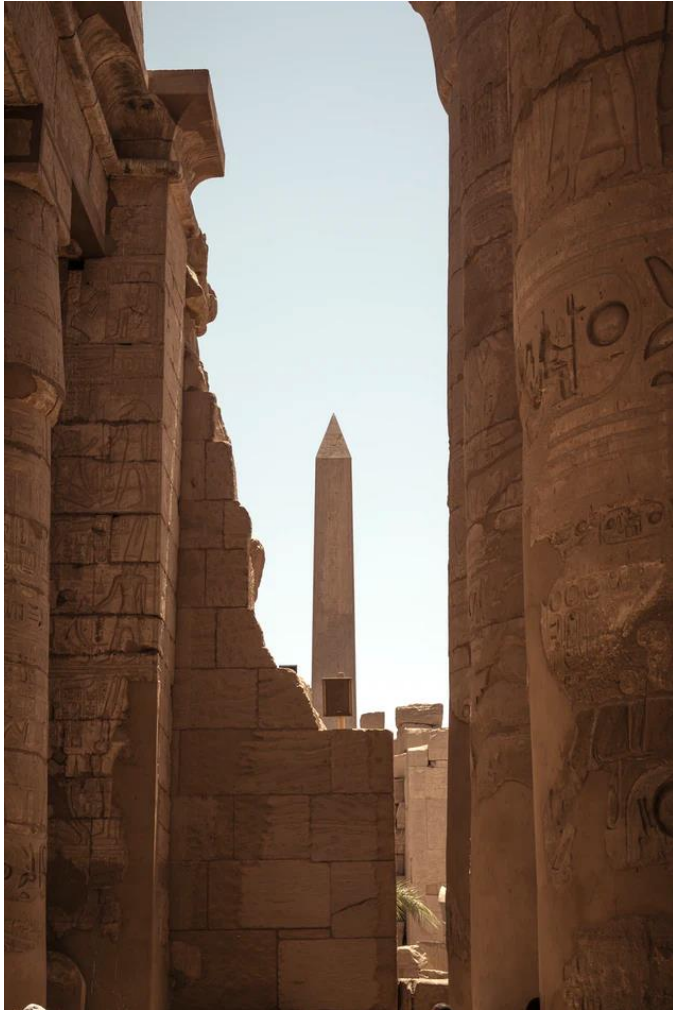
## Launch

What do you notice?

What do you wonder?

## Grade 5

A *talatat* is a standard-sized stone block that was used in some Egyptian monuments. A talatat is about 27 cm by 27 cm by 54 cm. What is the volume of a talatat?



<b>Grade K</b>	What things do you see in the picture that you could build with blocks? Describe the blocks you would use. (K.G.B.5)
<b>Grade 1</b>	What shapes in the picture seem to be made up of other shapes? Point to them and explain what shapes make them up. (1.G.A.2)
<b>Grade 2</b>	Each tall stone column in the picture is about 79 feet tall. The <i>obelisk</i> , pointed tower, is 95 feet tall. How much taller is the obelisk than a column? (2.MD.B.5)
<b>Grade 3</b>	A <i>talatat</i> is a standard-sized stone block that was used in some Egyptian monuments. Would you expect a talatat to weigh 70 grams or 70 kilograms? Explain. (3.MD.A.2)
<b>Grade 4</b>	Where do you see angles in the picture? What types of angles are they? Sketch them. (4.G.A.1)
<b>Grade 5</b>	A <i>talatat</i> is a standard-sized stone block that was used in some Egyptian monuments. A talatat is about 27 cm by 27 cm by 54 cm. What is the volume of a talatat? (5.MD.C.5)



## Launch

Using the picture, complete this question in as many ways as you can: How many \_\_\_\_ are in the picture?

## Grade

1

Use the picture to show which of these equations is *not* true:

- $3 + 2 = 2 + 3$
- $5 = 3 + 2$
- $4 + 1 = 5 - 1$



<p><b>Grade K</b></p>	<p>How many spoons do you see in the picture? If 3 spoons were taken away, how many would you see? Explain how you know. (K.OA.A.5)</p>
<p><b>Grade 1</b></p>	<p>Use the picture to show which of these equations is <i>not</i> true:</p> <ul style="list-style-type: none"> <li>● <math>3 + 2 = 2 + 3</math></li> <li>● <math>5 = 3 + 2</math></li> <li>● <math>4 + 1 = 5 - 1</math></li> </ul> <p>(1.OA.D.7)</p>
<p><b>Grade 2</b></p>	<p>There are about 154 peppercorns in this picture. Write the number 154 in words and in expanded form. (2.NBT.A.3)</p>
<p><b>Grade 3</b></p>	<p>There are about 154 peppercorns in this picture. What is 154 rounded to the nearest ten? To the nearest hundred? (3.NBT.A.1)</p>
<p><b>Grade 4</b></p>	<p>There are about 154 peppercorns in this picture. The number of mustard seeds is about 10 times the number of peppercorns. About how many mustard seeds are there? (4.OA.A.1)</p>
<p><b>Grade 5</b></p>	<p>A grain of salt is 0.03 cm long. How many millimeters long is a grain of salt? (5.NBT.A.2 and 5.MD.A.1)</p>



### Launch

What do you notice?

What do you wonder?

### Grade 5

In the paint tray, the distance between the paint pots is 0.5 centimeters and the width across each paint pot is 3 centimeters. Which of these could be the dimensions of the paint tray in **meters**?

32 m by 14.5 m

3.2 m by 1.45 m

0.32 m by 0.145 m





<p><b>Grade K</b></p>	<p>Point to objects in the picture that complete these sentences:</p> <p>_____ is next to _____.</p> <p>_____ is above _____.</p> <p>_____ is below _____.</p> <p>(K.G.A.1)</p>
<p><b>Grade 1</b></p>	<p>Where would you draw a line to show half of the piece of paper? Can you show half of the paper in a different way?</p> <p>(1.G.A.3)</p>
<p><b>Grade 2</b></p>	<p>Where would you draw a line to show a third of the piece of paper? Can you show a third of the paper in a different way?</p> <p>(2.G.A.3)</p>
<p><b>Grade 3</b></p>	<p>The paper is about 9 inches long and 7 inches wide. Find the area and perimeter of a piece of the paper.</p> <p>(3.MD.C.7 and 3.MD.D.8)</p>
<p><b>Grade 4</b></p>	<p>Where do you see parallel and perpendicular lines? Where do you see acute, obtuse, and right angles?</p> <p>(4.G.A.1)</p>
<p><b>Grade 5</b></p>	<p>In the paint tray, the distance between the paint pots is 0.5 centimeters and the width across each paint pot is 3 centimeters. Which of these could be the dimensions of the paint tray in <b>meters</b>?</p> <p>(5.MD.A.1)</p> <p>32 m by 14.5 m          3.2 m by 1.45 m          0.32 m by 0.145 m</p>



### Launch

What is familiar about the picture?

What questions do you have about the picture?

### Grade 2

Where do you see arrays in the picture? Describe the array to someone and ask them to find the array you described.





<p><b>Grade K</b></p>	<p>How many cars can you count in the picture? (K.CC.B.5)</p>
<p><b>Grade 1</b></p>	<p>How many more cars would need to park on the street for there to be 20 cars in all? (1.OA.A.1)</p>
<p><b>Grade 2</b></p>	<p>Where do you see arrays in the picture? Describe the array to someone and ask them to find the array you described. (2.OA.C.4)</p>
<p><b>Grade 3</b></p>	<p>Describe an array you see in the picture. Write a multiplication equation to represent the array you described. Can you find another? (3.OA.A.3)</p>
<p><b>Grade 4</b></p>	<p>Complete this sentence in as many ways as you can using objects in the picture:</p> <p>There are ___ times as many _____ than _____.</p> <p>(4.OA.A.1)</p>
<p><b>Grade 5</b></p>	<p>Complete this equation based on the grouping of objects in the picture:</p> <p><math>( \_ \times \_ ) + ( \_ \times \_ ) = \_ \_ \_ ?</math></p> <p>Can you think of another way? (5.OA.A.1)</p>



## Launch

Tell a story about what happened before this picture was taken.

## Grade K

Point to the objects in the picture as you complete these sentences:

\_\_\_\_\_ is taller than \_\_\_\_\_.

\_\_\_\_\_ is shorter than \_\_\_\_\_.



<p><b>Grade K</b></p>	<p>Point to the objects in the picture as you complete these sentences:          _____ is taller than _____.          _____ is shorter than _____.          (K.MD.A.2)</p>
<p><b>Grade 1</b></p>	<p>Point to the objects in the picture as you complete this sentence:          _____ is taller than _____ which is even taller than _____. (1.MD.A.1)</p>
<p><b>Grade 2</b></p>	<p>Kiran says the fabrics hanging on the wall are about 6 feet in length. Elena says they are about 2 meters in length. Explain why both Kiran and Elena could be right.          (2.MD.A.2)</p>
<p><b>Grade 3</b></p>	<p>One of the striped fabrics weighs about 428 grams, and one of the brown fabrics weighs about 457 grams. What is the weight of these 2 fabrics together? (3.MD.A.2)</p>
<p><b>Grade 4</b></p>	<p>One of the rectangular-shaped fabrics is 72 inches long and 30 inches wide. What is the area and perimeter of this piece of fabric? (4.MD.A.3)</p>
<p><b>Grade 5</b></p>	<p>Each folded fabric has a volume of 432 cubic inches. How many folded fabrics can fit inside a shipping box with the dimensions of 1 foot by 1 foot by 2 feet?          (5.MD.C.3 and 5.MD.A.1)</p>



## Launch

This is a puzzle with pictures of ice pops. Describe the patterns you see in the puzzle.

## Grade K

How many ice pops have sticks in them?  
How did you count them?



*Thank you Wes and schoolmates for sending us the picture and question ideas. Great thinking!*

<b>Grade K</b>	How many ice pops have sticks in them? Explain how you counted them. (K.CC.B.5)
<b>Grade 1</b>	How could you sort the ice pops into 2 categories? How could you sort them into 3 categories? Create a representation to show how you sorted them. (1.MD.C.4)
<b>Grade 2</b>	Create a bar graph that shows the number of ice pops that are one color, striped, or a different pattern. What questions can you ask about the data in your bar graph? (2.MD.D.10)
<b>Grade 3</b>	Write a multiplication equation to represent the number of ice pops in the puzzle. (3.OA.A.1)
<b>Grade 4</b>	Each ice pop is 3 inches long in the puzzle. Describe how you can use that information to estimate the area and perimeter of the puzzle. (4.MD.A.3)
<b>Grade 5</b>	The puzzle comes in a box that is 11 inches by 2 inches by 13 inches. What is the volume of the puzzle box? (5.MD.C.5)



## Launch

Describe a game you could play with the objects in the picture.

## Grade 2

Describe how 4 bean bags could land on the point markers to get a score of 180 points. Is there another way to get 180 points with 4 bean bag tosses? Explain or show your reasoning.

Thank you [Britni Vienna@MrsViennaOR](mailto:BritniVienna@MrsViennaOR) for the image and activity idea!



In this outdoor bean bag toss game, points are scored as indicated by the multiples of 10 on the circular markers. A bean bag must land completely on a marker to score the points. A bean bag on the grass is worth zero points.

<b>Grade K</b>	Are there more circle markers or more bean bags? (K.CC.C.6)
<b>Grade 1</b>	Choose numbers from the picture to complete the comparisons: $\underline{\quad} > \underline{\quad}$ $\underline{\quad} < \underline{\quad}$ Can you complete the comparisons another way? (1.NBT.B.3)
<b>Grade 2</b>	Describe how 4 bean bags could land on the circles to create a total score of 180 points. Is there another way to get 180 points with 4 bean bag tosses? Explain. (2.NBT.B.6)
<b>Grade 3</b>	If the 7 bean bags were thrown and all landed on the circle marker for 40, how many points would be scored? (3.NBT.A.3)
<b>Grade 4</b>	Priya tossed the 7 bean bags. There were 2 that landed on 50, 3 that landed on the 30, and 2 that landed on the 20 point circle marker. Write and solve an equation that matches Priya's tosses to find her score. (4.OA.A.3)
<b>Grade 5</b>	Tyler tossed the 7 bean bags. Write a mathematical expression to represent Tyler's score based on this description of his tosses: <i>Tyler scored the sum of 3 fifty point tosses and 4 thirty point tosses.</i> (5.OA.A.2)



## Launch

What do you notice?

What do you wonder?

## Grade 1

Each red chili pepper is about 1 inch long. About how many red chili peppers would be the same length as 1 cucumber? Explain or show your reasoning.





<p><b>Grade K</b></p>	<p>Use the picture to complete these sentences:</p> <p>_____ is longer than _____.</p> <p>_____ is shorter than _____ . (K.MD.A.2)</p>
<p><b>Grade 1</b></p>	<p>Each red chili pepper is about 1 inch long. About how many red chili peppers would be the same length as 1 cucumber? Explain your reasoning. (1.MD.A.2)</p>
<p><b>Grade 2</b></p>	<p>Each carrot is about 3 inches long. Draw a line that you think is about 3 inches long. Measure your line with a ruler to see how close you are. (2.MD.A.2)</p>
<p><b>Grade 3</b></p>	<p>If 1 carrot weighs 12 grams, what is the weight of 8 carrots? Explain or show your reasoning. (3.MD.A.2, 3.NBT.A.3)</p>
<p><b>Grade 4</b></p>	<p>Kiran shopped for carrots and okra. He bought 3 pounds of carrots at \$1.50 a pound and 4 pounds of okra at \$2.49 a pound. How much did Kiran spend on the vegetables? (4.MD.A.2)</p>
<p><b>Grade 5</b></p>	<p>Elena bought 20 ounces of carrots, 26 ounces of cucumbers, and 18 ounces of chili peppers. About how many pounds of vegetables did Elena buy? (16 ounces = 1 pound) (5.MD.A.1)</p>



### Launch

What can you count in this picture? Show how you would count them.

### Grade 5

The smallest of these young cows weighs about 447 pounds. What is this weight in ounces?

*(16 ounces = 1 pound)*



<b>Grade K</b>	How many more cows would make 10? (K.OA.A.4)
<b>Grade 1</b>	How many more cows would make 17? (1.OA.A.1)
<b>Grade 2</b>	Is the number of ears on all of the cows odd or even? Explain your reasoning. (2.OA.C.3)
<b>Grade 3</b>	The smallest of these young cows weighs about 447 pounds and the largest weighs 503 lbs. How much more does the larger cow weigh? (3.NBT.A.2)
<b>Grade 4</b>	Three of the cows in the photo weigh 447 lbs, 489 lbs, and 503 lbs. How much do the 3 cows weigh altogether? (4.NBT.B.4)
<b>Grade 5</b>	The smallest of these young cows weighs about 447 pounds. What is this weight in ounces? ( <i>16 ounces = 1 pound</i> ) (5.NBT.B.5 and 5.MD.A.1)



### Launch

What math questions could you ask about the picture?

### Grade

Mai has these 4 large clay pots at her house. Andre has 6 times as many clay pots at his house. How many clay pots does Andre have?



<p><b>Grade K</b></p>	<p>How many large clay pots do you see? Write the number. Start at this number and count to 75. (K.CC.A.2 and K.CC.A.3)</p>
<p><b>Grade 1</b></p>	<p>Mai has these 4 large clay pots at her house. Clare has 13 large clay pots at her house. How many more clay pots does Clare have than Mai? Explain or show your reasoning. (1.OA.A.1)</p>
<p><b>Grade 2</b></p>	<p>Mai has these 4 large clay pots at her house. Mai has 18 fewer clay pots than Noah has at his house. How many clay pots does Noah have? (2.OA.A.1)</p>
<p><b>Grade 3</b></p>	<p>The large clay pots are shipped in crates of 6. How many claypots are in 8 crates? (3.OA.A.3)</p>
<p><b>Grade 4</b></p>	<p>Mai has these 4 large clay pots at her house. Andre has 6 times as many clay pots at his house. How many clay pots does Andre have? (4.OA.A.2)</p>
<p><b>Grade 5</b></p>	<p>Each of these large clay pots sells for \$238. If Jada has \$900 does she have enough money to buy 4 of them? Explain your answer. (5.NBT.B.5)</p>



### Launch

What math questions could you ask about this picture?

### Grade 4

What questions about lines, angles, or shapes can you ask about the picture? Ask someone to answer your questions.



We would love to hear from our math community. Please send your question and activity ideas our way in this form:

<https://forms.gle/2bAv1iEepZaRh5RA>.

Watch for the slide to appear next week with some of the questions you've submitted!

<b>Grade K</b>	What questions about shapes can you ask about the picture? Ask someone to answer your questions. (K.G.A and K.G.B)
<b>Grade 1</b>	What questions about shapes can you ask about the picture? Ask someone to answer your questions. (1.G.A)
<b>Grade 2</b>	What questions about shapes can you ask about the picture? Ask someone to answer your questions. (2.G.A)
<b>Grade 3</b>	What questions about shapes can you ask about the picture? Ask someone to answer your questions. (3.G.A)
<b>Grade 4</b>	What questions about lines, angles, and shapes can you ask about the picture? Ask someone to answer your questions. (4.G.A)
<b>Grade 5</b>	What questions about two-dimensional figures can you ask about the picture? Ask someone to answer your questions. (5.G.B)



### Launch

What do you notice?

What do you wonder?

### Grade 2

There are 7 nuts in this bowl. Clare has a different bowl with 23 nuts in it. How many fewer nuts are in this bowl compared to Clare's bowl? Show or explain your reasoning.







<p><b>Grade K</b></p>	<p>There are 7 nuts in this bowl. How many more to make 10? (K.OA.A.4)</p>
<p><b>Grade 1</b></p>	<p>Priya bought a small bag of nuts. She put 7 nuts in the bowl. There were 9 nuts left in the bag. How many nuts were in the bag when Priya bought it? Show or explain your reasoning. (1.OA.A.1)</p>
<p><b>Grade 2</b></p>	<p>There are 7 nuts in this bowl. Clare has a different bowl with 23 nuts in it. How many fewer nuts are in this bowl compared to Clare's bowl? Show or explain your reasoning. (2.OA.A.1)</p>
<p><b>Grade 3</b></p>	<p>There are 7 nuts in the bowl. If everyone at a family party – 2 tables of 8 guests each – were to have a bowl like this, how many nuts would there be in all? (3.OA.D.8)</p>
<p><b>Grade 4</b></p>	<p>There are 7 nuts in the bowl. The number of corn kernels in the bowl is 43 times greater than the number of nuts in the bowl. How many corn kernels are in the bowl? (4.OA.A.2 and 4.NBT.B.5)</p>
<p><b>Grade 5</b></p>	<p>One of the nuts is about 0.032 m long and a kernel of corn is about 0.009 m long. Write these decimals in word form. Make a comparison statement using <math>&lt;</math> or <math>&gt;</math> about the decimals. (5.NBT.A.3)</p>



## Launch

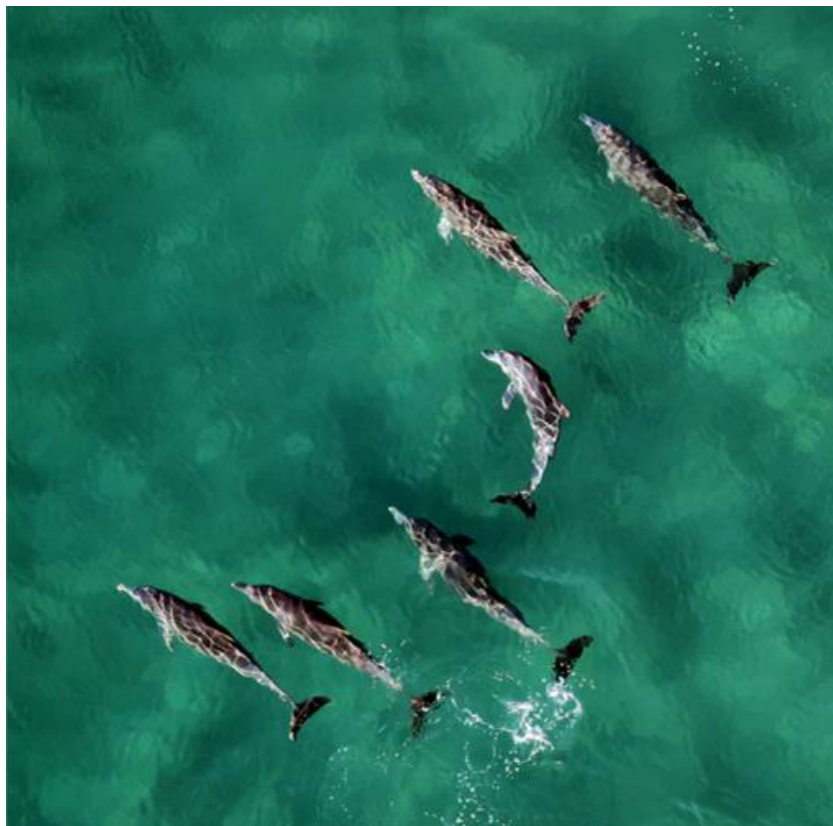
Tell a story about the picture.

**Grade  
4**

The weight of an egg is about 57 grams, what is the weight, in grams, of a dozen eggs?



<p><b>Grade K</b></p>	<p>What could you measure in the picture? Complete the sentences:            There is more _____ than _____.            There is less _____ than _____.            (K.MD.A.1 and K.MD.A.2)</p>
<p><b>Grade 1</b></p>	<p>Complete the sentences:            Compared to the scissors the _____ is longer.            Compared to the scissors the _____ is shorter.            (1.MD.A.1)</p>
<p><b>Grade 2</b></p>	<p>The markers in the picture are about 5 inches long. If you lined up all the markers you see, how long would the line be? (2.MD.B.5)</p>
<p><b>Grade 3</b></p>	<p>Would the water in the three bowls be less than, greater than, or about equal to a liter? Explain. (3.MD.A.2)</p>
<p><b>Grade 4</b></p>	<p>The weight of an egg is about 57 grams, what is the weight, in grams, of a dozen eggs? (4.MD.A.2 and 4.NBT.B.5)</p>
<p><b>Grade 5</b></p>	<p>The weight of an egg is about 57 grams, what is the weight, in <b>kilograms</b>, of a dozen eggs? (5.MD.A.1)</p>



### Launch

What equations can you write to represent the number of dolphins in the picture?

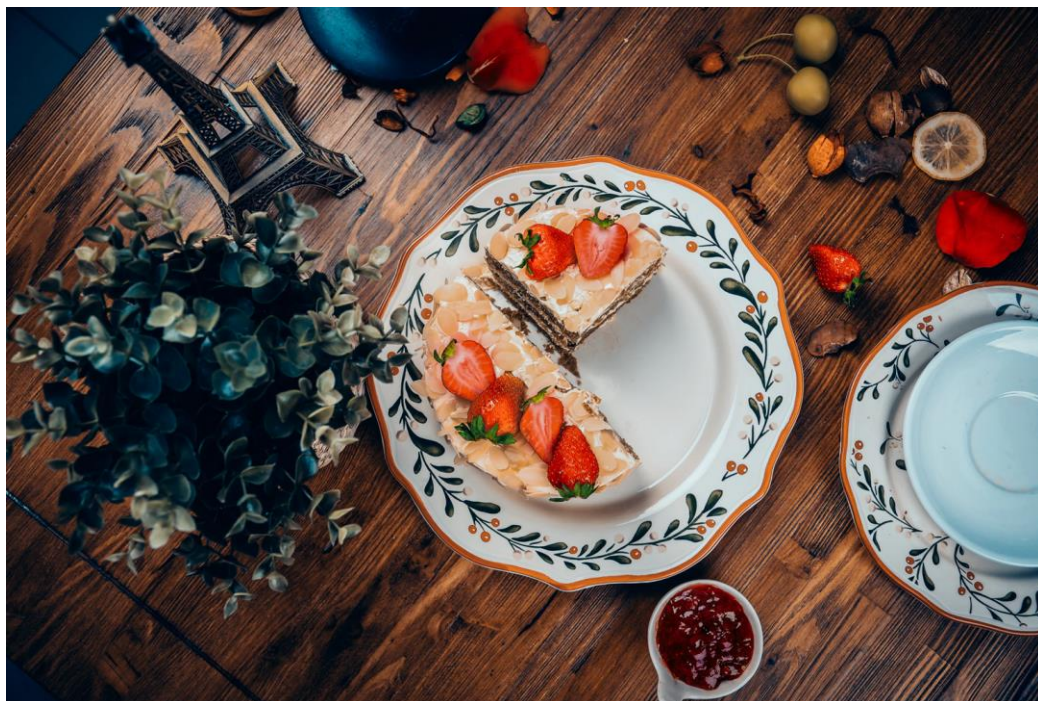
Try to write as many equations as you can and explain how they match the picture.

**Grade**  
**3**

A group of dolphins is called a *pod*. This pod has 6 dolphins in it. How many dolphins are in 4 pods of this size?



<b>Grade K</b>	How many dolphins do you see in the picture? How many more to make 10? (K.OA.A.4)
<b>Grade 1</b>	These are the dolphins left swimming together after 11 dolphins swam away. How many dolphins were swimming together before? (1.OA.A.1)
<b>Grade 2</b>	A group of dolphins is called a <i>pod</i> . Is the number of dolphins in this pod odd or even? Show or explain your reasoning. (2.OA.C.3)
<b>Grade 3</b>	A group of dolphins is called a <i>pod</i> . This pod has 6 dolphins in it. How many dolphins are in 4 pods of this size? (3.OA.A.3)
<b>Grade 4</b>	A group of dolphins is called a <i>pod</i> . Typically the largest pod will be 5 times as large as the group in the picture. How many dolphins are in a largest pod? How many dolphins would be in 11 large pods? (4.OA.A.2)
<b>Grade 5</b>	The spinner dolphin ranges in length from 4.2 feet to 7.7 feet. What is this range of lengths in inches? (5.NBT.B.7 and 5.MD.A.1)



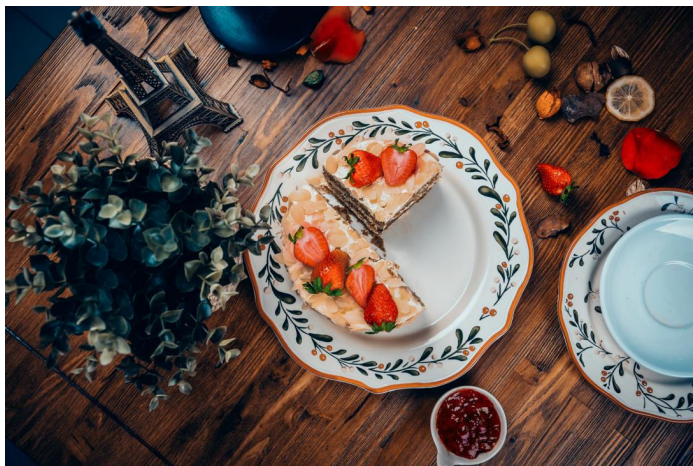
### Launch

This is a picture of what is left of 1 strawberry tart.

Describe the tart left on the plate using as many math words as you can.

**Grade 3**

About what fraction of the tart has been eaten?  
What fraction is left on the plate?



This is a picture of what is left of 1 strawberry tart.

<b>Grade K</b>	Which tart slice has more strawberries on it? How many more strawberries does it have than the other slice? (K.CC.C.6)
<b>Grade 1</b>	Describe how the tart has been split. Which of these words will you use to describe the pieces: half, fourth, or quarter? (1.G.A.3)
<b>Grade 2</b>	Draw and partition a circle to represent the tart. Describe what you drew using words such as half or fourth. (2.G.A.3)
<b>Grade 3</b>	About what fraction of the tart has been eaten? What fraction is left on the plate? (3.NF.A.1)
<b>Grade 4</b>	A fractional part of the tart remains on the plate. If there are 3 more plates with the same amount or tart left on each, how many tarts would that be altogether? (4.NF.B.3)
<b>Grade 5</b>	Clare and Mai equally shared the fraction of a tart that is left on the plate. How much of the whole tart did each girl eat? (5.NF.B.7)



## Launch

Tell a story about what could have happened after this picture was taken.

## Grade 2

Where do you see an array in the picture?  
Write an addition equation to represent the number of objects in the array.





<p><b>Grade K</b></p>	<p>Are there more or less than 10 tools in the picture? How do you know? (K.CC.C.6)</p>
<p><b>Grade 1</b></p>	<p>What story problem could you write about the tools? Ask a friend to solve your story problem. Work together to agree on an equation to represent the story problem. (1.OA.A.1 and 1.OA.A.2)</p>
<p><b>Grade 2</b></p>	<p>Where do you see an array in the picture? Write an addition equation that could represent the number of objects in the array. (2.OA.C.4)</p>
<p><b>Grade 3</b></p>	<p>Where do you see objects in the picture that could be represented by these expressions?</p> $5 \times 2$ $4 + 4$ $4 + 3 + 3 \times 3$ <p>(3.OA.A.3 and 3.OA.D.8)</p>
<p><b>Grade 4</b></p>	<p>Priya has a box of 150 screws. She is making birdhouses that need 8 screws each. Does Priya have enough screws to make 18 birdhouses? If so, how many screws will be left over? (4.OA.A.3)</p>
<p><b>Grade 5</b></p>	<p>Explain how each of these expressions represent the objects in the picture:</p> $10 + 5 + 9 + 3 + 4 + 2$ $(2 \times 5) + 5 + (3 \times 3) + 4$ <p>Can you write a different expression that includes parentheses to represent the objects? (5.OA.A.1)</p>



### Launch

What math words are most helpful in describing what you see in the picture?

### Grade 1

What shapes do you see in the picture? What smaller shapes make up the larger shapes?





<p><b>Grade K</b></p>	<p>What shapes do you see in the picture? Can you build what you see with things around you? (K.G.A.1 and K.G.B.5)</p>
<p><b>Grade 1</b></p>	<p>What shapes do you see in the picture? What smaller shapes make up the larger shapes? (1.G.A.2)</p>
<p><b>Grade 2</b></p>	<p>How many rectangles do you see in the picture? Do you see half of a rectangle in the picture? (2.G.A.1)</p>
<p><b>Grade 3</b></p>	<p>Where do you see 4-sided shapes in the picture? What are the names of the 4-sided shapes you see? (3.G.A.1)</p>
<p><b>Grade 4</b></p>	<p>Where do you see parallel and perpendicular lines in the picture? Where do you see acute, obtuse, and right angles in the picture? (4.G.A.1)</p>
<p><b>Grade 5</b></p>	<p>How many different types of quadrilaterals do you see in the picture? Name them. How are they the same? How are they different? (5.G.B.3)</p>



### Launch

What do you notice?

What do you wonder?

### Grade K

Describe things you see in the picture using the words *above*, *below*, *beside*, or *next to*.



Thanks to Maureen O'Connell for the picture!

<b>Grade K</b>	Describe things you see in the picture using the words <i>above, below, beside</i> or <i>next to</i> . (K.G.A.1)
<b>Grade 1</b>	How many trees can you count in the picture? If there were 10 more trees how many would there be in all? (1.NBT.C.5)
<b>Grade 2</b>	How many trees can you count in the picture? If there are 21 trees on the next path, how many trees would there be in all? (2.NBT.B.6)
<b>Grade 3</b>	Some trees grow about 9 inches in a year. About how long would it take one of these trees to grow 72 inches? (3.NBT.A.3)
<b>Grade 4</b>	One of these trees is 100 years old. The child is 4 years old. How many times older is the tree than the child? (4.OA.A.2)
<b>Grade 5</b>	One of these pine trees is 120 feet tall. The child is about 4 feet tall. What fraction of the tree's height does the child represent? Explain your reasoning. (5.NBT.B.5)

**Launch**

What questions could you ask and answer about the picture?

**Grade**  
**3**

What types of quadrilaterals do you see in the picture? Describe how they are the same and how they are different. Use words such as corners, vertices, sides, and angles.



<b>Grade K</b>	How many triangles do you see in the picture? (K.G.A.2)
<b>Grade 1</b>	What shapes do you see in the picture? What smaller shapes make up the larger shapes? (1.G.A.2)
<b>Grade 2</b>	What shapes do you see in the picture? Sketch them. (2.G.A.1)
<b>Grade 3</b>	What quadrilaterals do you see in the picture? Describe how they are the same and how they are different. Use words such as corners, vertices, sides, and angles. (3.G.A.1)
<b>Grade 4</b>	Describe the angles you see in the picture. What kind of angles are they? (4.G.A.1)
<b>Grade 5</b>	<p>Complete the sentences:</p> <p>The __-sided and __-sided shapes in the picture can be called _____.</p> <p>The __-sided shapes in the picture can be called _____, but they cannot be called _____. (5.G.B.4)</p>



## Launch

What can you count in the picture? Show how you would count them.

**Grade**  
**2**

What measuring tool is shown in the picture?

What are some things this tool is best for measuring?

What is something this tool would *not* be good for measuring?





<b>Grade K</b>	How could you sort the objects you see into groups? How many objects are in each group? (K.MD.B.3)
<b>Grade 1</b>	Complete the sentences: The _____ is longer than the _____ and the _____. The _____ is shorter than the _____ and the _____. (1.MD.A.1)
<b>Grade 2</b>	What measuring tool is shown in the picture? What are some things this tool is best for measuring? What is something this tool would <i>not</i> be good at measuring? (2.MD.A.1)
<b>Grade 3</b>	Would the weight of all the buttons most likely be 2 grams or 2 kilograms. Explain. (3.MD.A.2)
<b>Grade 4</b>	One of the spools of thread has 100 yards of thread on it. How many feet are in 100 yards? How many inches? (4.MD.A.1)
<b>Grade 5</b>	One spool has 588 inches of pink thread on it and one spool has 2,424 inches of green thread on it. What is the difference, in feet, between the amount of thread on these two spools? (5.MD.A.1)



### Launch

These unusual homes are called *Cube Houses*.

What do you notice about them?

What do you wonder about them?

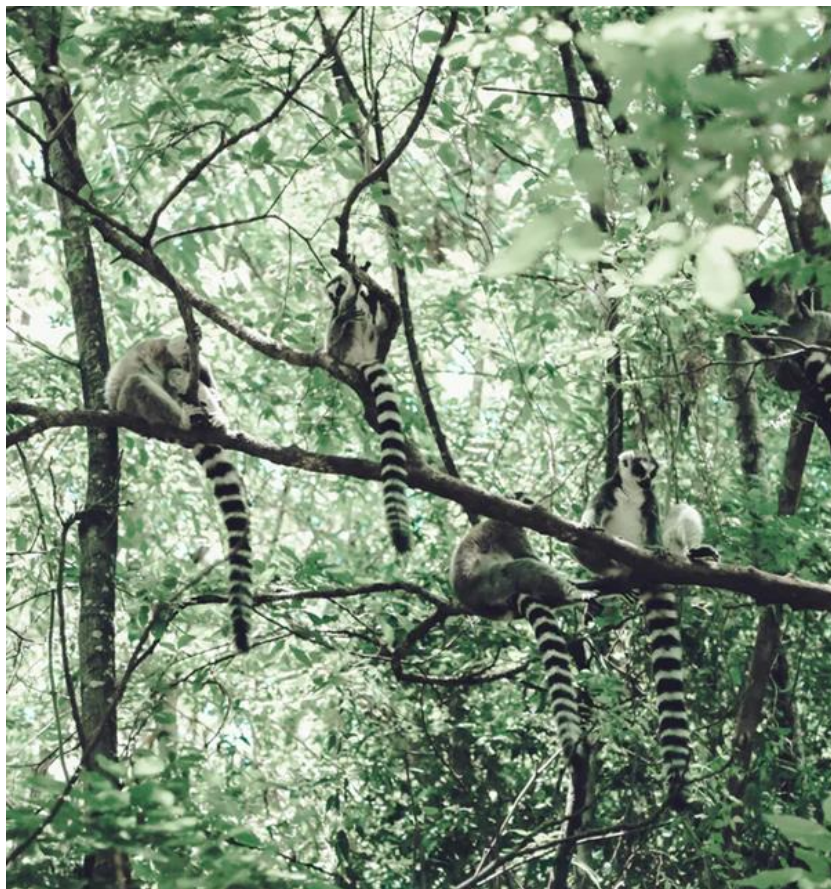
**Grade  
1**

In this neighborhood, there are some large cube houses and 13 small cube houses. If there are 20 cube houses in the neighborhood, how many large cube houses are there?



These unusual homes, called *The Cube Houses*, are in a neighborhood in the city of Rotterdam, in the country of the Netherlands.

<b>Grade K</b>	How many doors do you see? How did you count them? (K.CC.B.5)
<b>Grade 1</b>	In this neighborhood, there are some large cube houses and 13 small cube houses. If there are 20 cube houses in the neighborhood, how many large cube houses are there? (1.OA.A1)
<b>Grade 2</b>	The builders planned to build 55 cube houses, but only 38 were built. How many were <i>not</i> built? (2.OA.A.1)
<b>Grade 3</b>	Some of the cube houses have been converted into hotel rooms. The cost of one of these hotel rooms is about \$90 for each night. How much would it cost to stay for 3 nights? (3.NBT.A.3)
<b>Grade 4</b>	Each of the 38 cube houses have 5 rooms. How many rooms are there in the whole cube neighborhood? (4.OA.A.3)
<b>Grade 5</b>	The floor space in each cube house is around 1080 square feet distributed over 4 floors. Of the 1080 square feet of living space, only 270 square feet is usable due to the steep angles of the floors. Write an expression that represents the amount of floor space on each floor that is <i>not</i> usable. (5.OA.A.1)

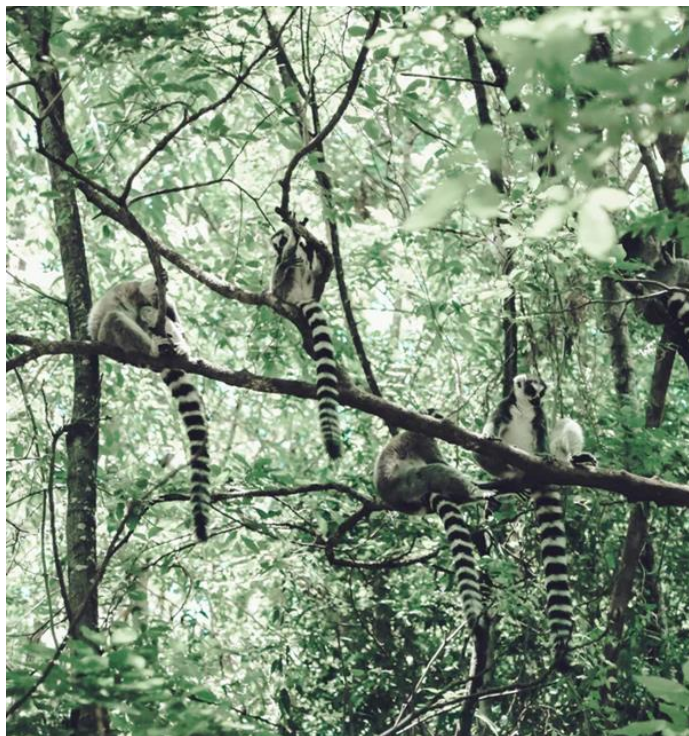


### Launch

Describe where you see math in this picture.

**Grade  
4**

Every ring-tailed lemur has 13 stripes, called *rings*, on their tails. How many rings are on the tails of all of the lemurs in the picture?



These animals with long, striped tails are called *ring-tailed lemurs*.

<p><b>Grade K</b></p>	<p>How many lemurs do you see? How many more lemurs are needed to have 10 lemurs in all? (K.OA.A.4)</p>
<p><b>Grade 1</b></p>	<p>Before the picture was taken, there were 14 lemurs in the trees. How many lemurs left before the picture was taken? (1.OA.A.1)</p>
<p><b>Grade 2</b></p>	<p>Most lemurs eat a lot of leaves. One lemur ate 62 leaves in the early morning, 54 leaves in the late morning, 38 leaves in the afternoon, and 40 leaves just before going to sleep. How many leaves did the lemur eat that day? (2.NBT.B.6)</p>
<p><b>Grade 3</b></p>	<p>Typically these lemurs weigh about 3 kilograms. What is the weight of all the lemurs in the picture? (3.OA.A.3)</p>
<p><b>Grade 4</b></p>	<p>Every ring-tailed lemur has 13 black and white stripes, called <i>rings</i>, on their tails. How many rings are on the tails of all of the lemurs in the picture? (4.NBT.B.5)</p>
<p><b>Grade 5</b></p>	<p>Typically these lemurs live in a territory that ranges in size from 0.06 square kilometers to 0.2 square kilometers. What is the difference, in square kilometers, between these two territory sizes? (5.NBT.B.7)</p>



### Launch

What do you notice?

What do you wonder?

### Grade 3

Where do you see groups of objects in the picture? How could you find the total number of objects in those groups?



<p><b>Grade K</b></p>	<p>How many window shutters do you see? How many small balconies do you see? How many chimneys do you see? (K.CC.A.3)</p>
<p><b>Grade 1</b></p>	<p>How many rectangles do you see in the picture? (1.NBT.A.1)</p>
<p><b>Grade 2</b></p>	<p>Choose something to count by 2's in the picture. (2.NBT.A.2)</p>
<p><b>Grade 3</b></p>	<p>Where do you see groups of objects in the picture? How could you find the total number of objects in those groups? (3.OA.A.1)</p>
<p><b>Grade 4</b></p>	<p>If this building was built in 1906, how old is the building? (4.NBT.B.4)</p>
<p><b>Grade 5</b></p>	<p>The size of the rooftop garden is now about 78 square meters. It is <math>\frac{1}{3}</math> larger than the original garden. How could you find the size of the original garden? (5.NF.B.6)</p>



## Launch

Tell a story about what happened before this picture was taken.

## Grade 1

What shape is the flat surface of a cut orange most like? What objects around you are shaped like the flat surface of an orange?





<p><b>Grade K</b></p>	<p>What solid shape is a whole orange most like? What objects around you are shaped like an orange? (K.G.A.)</p>
<p><b>Grade 1</b></p>	<p>What shape is the flat surface of a cut orange most like? What objects around you are shaped like the flat surface of an orange? (1.G.A)</p>
<p><b>Grade 2</b></p>	<p>A whole orange is about 3 inches across. Draw a line that is about 3 inches long. Measure your line in inches to see how close you were. (2.MD.A.2)</p>
<p><b>Grade 3</b></p>	<p>Noah ate all these oranges in 7 minutes. If Noah started eating at 11:55 AM , what time did he finish eating the oranges? Show or explain your reasoning. (3.MD.A.1)</p>
<p><b>Grade 4</b></p>	<p>Estimate the measure of an angle in a section of a cut orange. (4.MD.C.6)</p>
<p><b>Grade 5</b></p>	<p>A whole orange typically has a volume of about 14 cubic inches. Estimate the number of whole oranges that could fit into a crate that is 18 inches by 12 inches by 10 inches. (5.MD.C.5)</p>



### Launch

What questions could you answer about this picture?

**Grade  
K**

How many baby geese are in the picture? How many more to make 10?





<b>Grade K</b>	How many baby geese are in the picture? How many more to make 10? (K.OA.A.4)
<b>Grade 1</b>	One day, Mia saw 6 baby geese, Tyler saw 5 baby geese, and Diego saw 4 baby geese. How many baby geese did they see in all that day? (1.OA.A.2)
<b>Grade 2</b>	Father goose weighs 204 ounces and mother goose weighs 188 ounces. Use $<$ or $>$ to compare the weights of the geese. (2.NBT.A.4)
<b>Grade 3</b>	Father goose weighs 204 ounces and mother goose weighs 188 ounces. What is the difference in their weights? (3.NBT.A.2)
<b>Grade 4</b>	Many male geese weigh 3 times as much as female geese. If male geese range in weight from 6 pounds to 15 pounds, what would be the weight range for female geese? (4.OA.A.2)
<b>Grade 5</b>	Geese can fly at an altitude of 9,800 meters. How many kilometers is that? Planes fly at about 12 kilometers - how much higher do planes fly? (5.NBT.B.7)



### Launch

Describe what this picture reminds you of.

**Grade**  
**5**

A rhinoceros eats about 1,920 ounces of grass each day.  
About how many pounds is that?





<p><b>Grade K</b></p>	<p>What is behind the smallest rhinoceros ? What is next to the biggest rhinoceros ? (K.G.A.1)</p>
<p><b>Grade 1</b></p>	<p>Build a rhinoceros out of blocks or other objects around you or draw a rhinoceros. What shapes did you use? (1.G.A.2)</p>
<p><b>Grade 2</b></p>	<p>A rhinoceros can grow to be about 6 feet tall. A rhinoceros can grow to be about 2 meters tall. How can both sentences be true? (2.MD.A.2)</p>
<p><b>Grade 3</b></p>	<p>Each day a rhinoceros drinks about the same amount of water that would fill a bathtub. About how many liters do you think that would be? (3.MD.A.2)</p>
<p><b>Grade 4</b></p>	<p>A rhinoceros lives about 35 years. How many weeks is that? (4.MD.A.3)</p>
<p><b>Grade 5</b></p>	<p>A rhinoceros eats about 1,920 ounces of grass each day. How many pounds is that? (5.MD.A.1)</p>



### Launch

What do you notice?

What do you wonder?

**Grade  
5**

A pound of beans costs \$2.47. Kiran bought 3 pounds of beans. He paid with a \$10 bill. How much change did Kiran get?



<p><b>Grade K</b></p>	<p>There is 1 yellow squash in the picture, how many more yellow squash would make 5? There are 3 leeks in the picture, how many more leeks would make 5? Write an equation to represent each situation. (K.OA.A.5)</p>
<p><b>Grade 1</b></p>	<p>Count the number of each type of fruit or vegetable in the picture. How much is 10 more than each of these amounts? Write an equation for each. (1.NBT.C.5)</p>
<p><b>Grade 2</b></p>	<p>Mai had all of the tomatoes in the picture. Then she bought some more. Now Mai has 39 tomatoes. How many tomatoes did Mai buy? (2.OA.A.1)</p>
<p><b>Grade 3</b></p>	<p>Carrots cost \$3 a bag and tomatoes cost \$8 a bag. Tyler wants to buy 3 bags of tomatoes and 1 bag of carrots. If Tyler has \$20, will he have enough money? Explain. (3.OA.D.8)</p>
<p><b>Grade 4</b></p>	<p>Jada ate <math>\frac{7}{8}</math> quart of vegetable soup. Diego ate <math>\frac{3}{4}</math> quart of vegetable soup. Who ate more vegetable soup? Explain or show your reasoning. (4.NF.A.2)</p>
<p><b>Grade 5</b></p>	<p>A pound of beans costs \$2.47. Kiran bought 3 pounds of beans. He paid with a \$10 bill. How much change did Kiran get? (5.NBT.B.7)</p>



### Launch

Describe what you see in the picture. What math words are helpful in your description?

**Grade  
3**

Each letter tile is 1 square inch. How many different rectangles with an area of 36 square inches could you build with these tiles?





<p><b>Grade K</b></p>	<p>These letter tiles are shaped like squares. What shapes can you make from 5 squares? Cut out paper squares and see. (K.G.B.6)</p>
<p><b>Grade 1</b></p>	<p>How can you describe the shape of the letter tiles? Describe 3 things you know about the shape of the tiles. (1.G.A)</p>
<p><b>Grade 2</b></p>	<p>Each letter tile is 1 inch on each side. Estimate how many tiles it would take to measure the length of a table around you. (2.MD.A.3)</p>
<p><b>Grade 3</b></p>	<p>Each letter tile is 1 square inch. How many different rectangles with an area of 36 square inches could you build with these tiles? (3.MD.C.6)</p>
<p><b>Grade 4</b></p>	<p>Which letters on the tiles have a line of symmetry? What other letters not shown in the picture have lines of symmetry? (4.G.A.3)</p>
<p><b>Grade 5</b></p>	<p>Can you think of at least 5 geometric names for the shape of the tiles? What are the attributes of the tile's shape? (5.G.B.3)</p>

**Launch**

What is familiar in the picture?

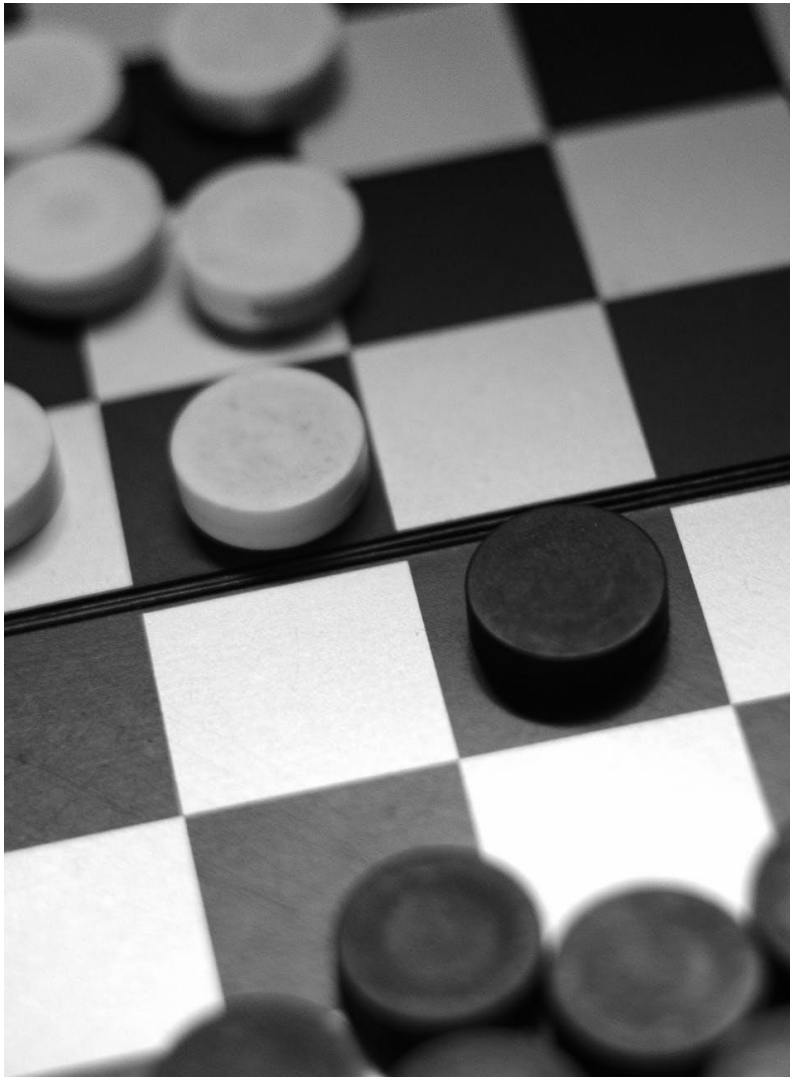
What is new?

**Grade  
3**

Create a picture graph with a scale of 2 to represent the types of instruments in the picture.



<b>Grade K</b>	How could you sort the instruments? (K.MD.B.3)
<b>Grade 1</b>	Sort the instruments into categories and create a data display. Write 2 questions for someone to answer about the data in your display. (1.MD.C.4)
<b>Grade 2</b>	Create a bar graph to represent the instruments in the picture. (2.MD.D.10)
<b>Grade 3</b>	Create a picture graph with a scale of 2 to represent the instruments in the picture. (3.MD.B.3)
<b>Grade 4</b>	An acoustic guitar can weigh between $2\frac{1}{2}$ and 5 pounds. What would this range be in ounces? (4.MD.A.1)
<b>Grade 5</b>	An acoustic guitar has the dimensions of 38 by 26 by 6 inches. What would be the volume of a box large enough to hold the guitar? (5.MD.C.5)

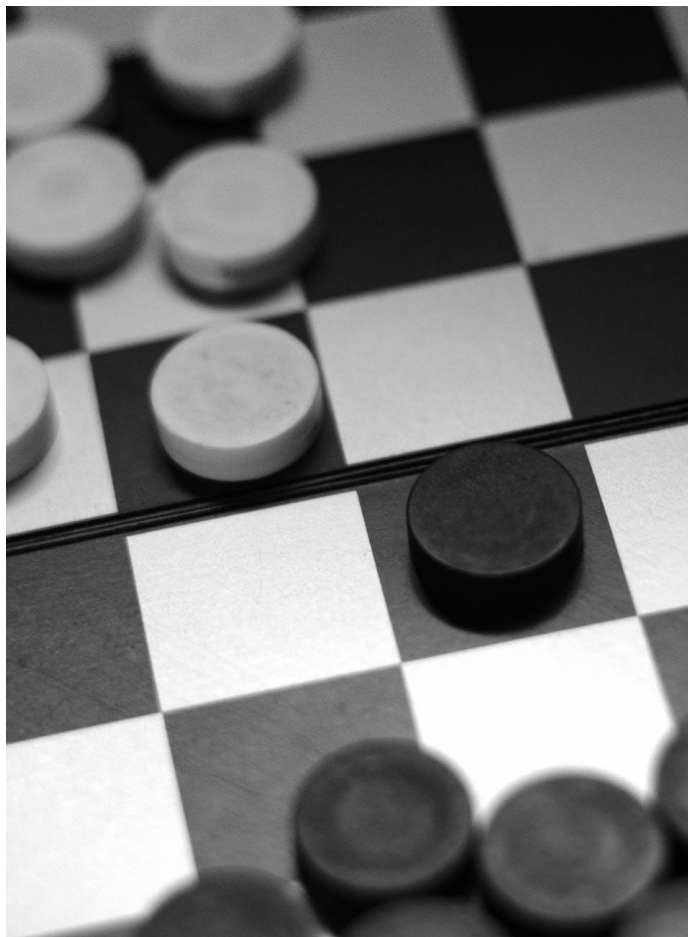


### Launch

What math questions can you ask about this picture?

### Grade 1

How many circles and squares do you see on the game board? Write an equation to represent your thinking.



<b>Grade K</b>	How many circles do you see in this picture? (K.CC.C.6)
<b>Grade 1</b>	How many circles and squares do you see on the game board? Write an equation to represent your thinking. (1.NBT.A.1)
<b>Grade 2</b>	The entire game board has 64 squares on it. How many squares are <b>not</b> shown in the picture? (2.OA.B.2)
<b>Grade 3</b>	The entire game board has 64 squares organized in an array. The number of squares along each side of the game board is the same. How many squares are along each side of the game board? (3.OA.A.3)
<b>Grade 4</b>	In this picture we can see some whole circles and some fractions of circles. What fractions of circles do you see that are less than $\frac{1}{2}$ ? More than $\frac{1}{2}$ ? (4.NF.A.2)
<b>Grade 5</b>	This game can be played on a board that is 30.2 cm by 30.2 cm. What is the area of this game board in square centimeters? (5.NBT.B.7)



# Talking Math

Day 70



## Launch

What do you notice?

What do you wonder?

**Grade**  
**2**

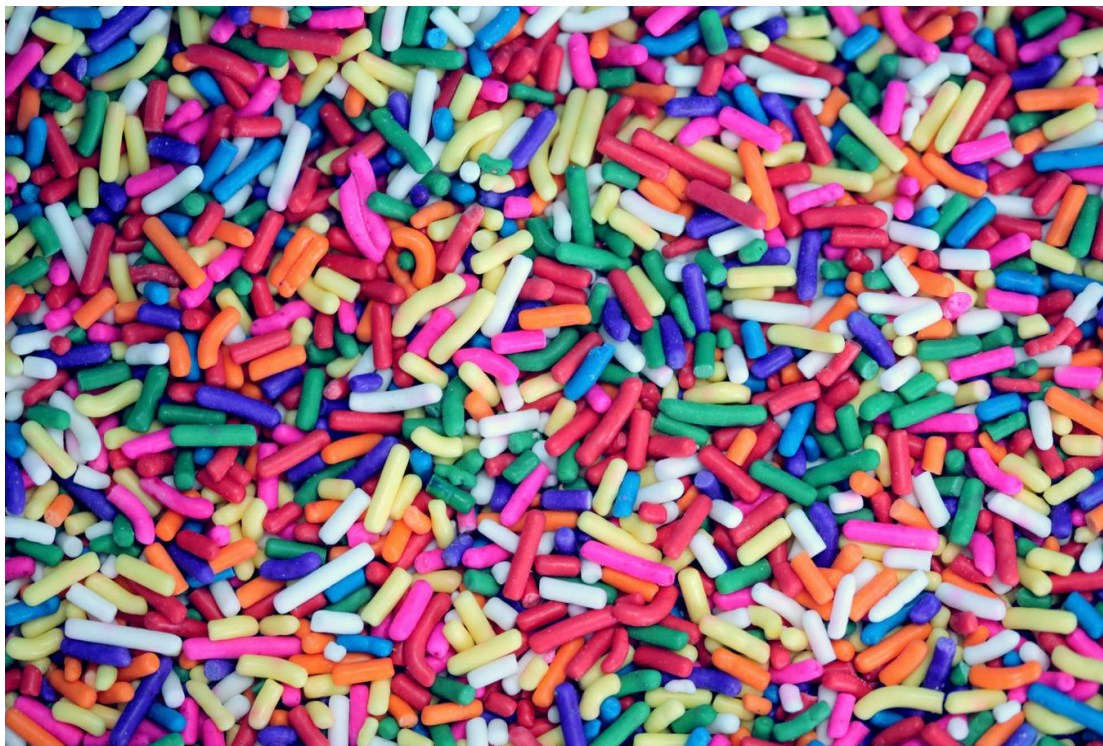
Where do you see shapes split into halves?  
Describe what you see.





Thank you so much for the photo  
Kaneka Turner!

<b>Grade K</b>	What shapes can you name in the picture? (K.G.A.2)
<b>Grade 1</b>	Where do you see shapes made up of smaller shapes. Describe what you see. (1.G.A.2)
<b>Grade 2</b>	Where do you see shapes split into halves? Describe what you see. (2.G.A.3)
<b>Grade 3</b>	What are the names of the 4-sided shapes you see? What shape name can be used for <b>all</b> the 4-sided shapes? (3.G.A.1)
<b>Grade 4</b>	Describe where you see parallel and perpendicular lines. Describe where you see angles. What kinds of angles are they? (4.G.A.1)
<b>Grade 5</b>	There are many 4-sided shapes in this photo, some of which we can name with different terms. What shapes in this picture can you name with more than one term? (5.G.B.3)



### Launch

What questions can you ask about this picture?

**Grade  
4**

Each serving size of candy is about 120 calories. There are about 9 servings in this picture. How many total calories are in the candy in the picture?





<p><b>Grade K</b></p>	<p>How many different colors do you see? Write the number. Count from this number to 52. (K.CC.A.2, K.CC.A.3, K.CC.B.5)</p>
<p><b>Grade 1</b></p>	<p>Do you think there are more or less than 120 candies here? Explain how you know. (1.NBT.A.1)</p>
<p><b>Grade 2</b></p>	<p>Noah says there are three hundred ninety seven candies here. Elena says there are four hundred twenty one candies here. Write a comparison using <math>&lt;</math> or <math>&gt;</math> with Noah's and Elena's numbers. (2.NBT.A.4)</p>
<p><b>Grade 3</b></p>	<p>Lin and Clare are going to split the candies. Lin will get more than Clare gets. If there are 413 candies here, figure out a number of candies Lin could have and how many Clare could have. Can you solve this another way? (3.OA.D.8)</p>
<p><b>Grade 4</b></p>	<p>Each serving size of candy is about 120 calories. There are about 9 servings in this picture. How many total calories are in the candy in the picture? (4.NBT.B.5)</p>
<p><b>Grade 5</b></p>	<p>There are 9.25 servings of candy in this picture. If Andre, Elena, and Diego each ate 1.5 servings of the candy, how many servings of candy would be left? (5.NBT.B.7)</p>



### Launch

Describe what you see in the picture. What math words are helpful in your description?

**Grade**  
**K**

Complete the sentence:  
I see a \_\_\_\_\_ shape beside a \_\_\_\_\_ shape.





<p><b>Grade K</b></p>	<p>Complete the sentence: I see a _____ shape beside a _____ shape. (K.G.A.1)</p> <p>Use blocks to make the log cabin. (K.G.B.5)</p>
<p><b>Grade 1</b></p>	<p>What new shape can you compose from some of the shapes in the picture? Draw your new shape. (1.G.A.2)</p>
<p><b>Grade 2</b></p>	<p>What flat shapes do you see? What solid shapes do you see? (2.G.A.1)</p>
<p><b>Grade 3</b></p>	<p>Can you find a rectangle that shows <math>\frac{1}{2}</math> in the picture? Where do you see a rectangle that shows <math>\frac{1}{3}</math>? (3.G.A.2)</p>
<p><b>Grade 4</b></p>	<p>Do you see more parallel or perpendicular lines in the picture? Explain. (4.G.A.1)</p>
<p><b>Grade 5</b></p>	<p>Make a hierarchy of the shapes seen in the picture. Use what you know about attributes to help you find connections between the shapes in your hierarchy. (5.G.B.4)</p>



### Launch

What questions could you answer about this picture?

**Grade**  
**5**

The average soccer player takes 212 steps in one minute of game play. How many steps would you estimate the average player takes when playing in a 60 minute game?





This is a soccer field with some of its playing lines labeled.

<b>Grade K</b>	A game of soccer is played with 11 team players on the field. Draw 11 players. (K.CC.B.5)
<b>Grade 1</b>	A game of soccer is played with 11 team players on the field. If 4 players are on the field, how many more players are needed to complete the team? (1.OA.A.1)
<b>Grade 2</b>	In one soccer season, Noah scored 51 goals. That same season Diego scored 28 goals. Who scored more goals? How many more? (2.OA.A.1)
<b>Grade 3</b>	The center line divides the field into 2 equal parts. The distance from the base line to the center line is 60 yards. How far, in yards, is the distance from the base line to the other base line of the field? (3.NBT.A.3)
<b>Grade 4</b>	The soccer player with the most goals scored in his career is Pele. He scored 1,281 goals. What is this number rounded to the nearest hundred? To the nearest thousand? (4.NBT.A.3)
<b>Grade 5</b>	The average soccer player takes 212 steps in one minute of game play. How many steps would you estimate the average player takes when playing in a 60 minute game? (5.NBT.B.5)



### Launch

What do you notice?

What do you wonder?

**Grade  
K**

What shapes do you see?

Can you draw them?



<b>Grade K</b>	What shapes do you see? Can you draw them? (K.G.A.1)
<b>Grade 1</b>	Where do you see shapes composed of other shapes? Can you draw them? (1.G.A.2)
<b>Grade 2</b>	Where do you see halves or fourths in the picture? (2.G.A.3)
<b>Grade 3</b>	How many different kinds of quadrilaterals do you see in the picture? Describe them and name them. (3.G.A.1)
<b>Grade 4</b>	Where do you see parallel perpendicular lines in the picture? (4.G.A.2)
<b>Grade 5</b>	Choose a shape in the picture and list at least 3 of its attributes. Consider using such words as sides, angles, and vertices. (5.G.B.3)

**Launch**

Tell a story about what happened before this picture was taken.

**Grade**  
**5**

If these 16 birds represent  $\frac{1}{5}$  of a flock, how many birds would be in the flock?





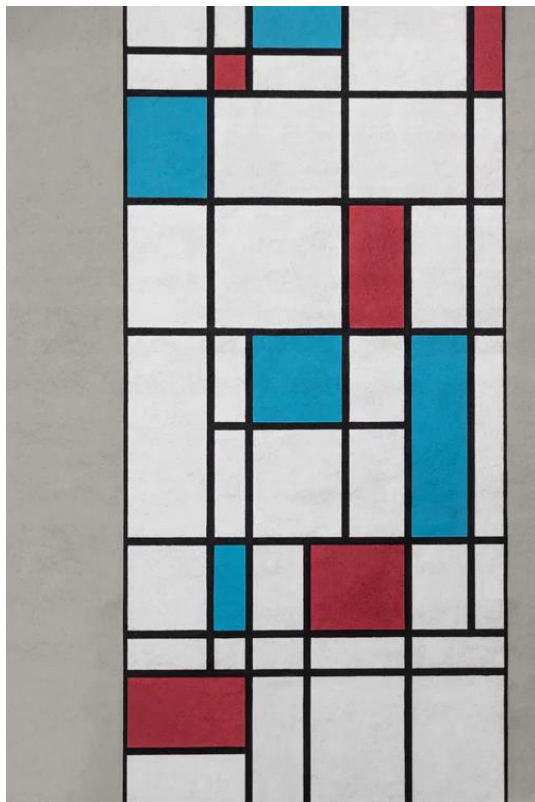
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<p><b>Grade K</b></p>	<p>Where do you see a group of 2 birds? How did you know there were 2? The number 3 is one more than 2, can you find a group of 3 birds? (K.CC.B.4)</p>
<p><b>Grade 1</b></p>	<p>These 16 birds were flying. Some of the birds landed on a rooftop. Then 7 birds were left flying. How many birds landed on the rooftop?(1.OA.A.1)</p>
<p><b>Grade 2</b></p>	<p>These 16 birds were flying. What equation can show 16 written as the sum of two numbers ? Think of as many equations as you can.(2.OA.B.2)</p>
<p><b>Grade 3</b></p>	<p>These 16 birds were flying. What numbers can replace the letters to make true equations about the number of flying birds?  <math>16 = b \times 4</math>                  <math>16 = 8 \times m</math>                  <math>16 = 1 \times p</math>            (3.OA.A.3)</p>
<p><b>Grade 4</b></p>	<p>These 16 birds were flying as a flock. How many birds would be in 23 such flocks?            (4.NBT.B.5)</p>
<p><b>Grade 5</b></p>	<p>If these 16 birds represent <math>\frac{1}{5}</math> of a flock, how many birds would be in the flock? (5.NF.B.7)</p>



# Talking Math

Day 76



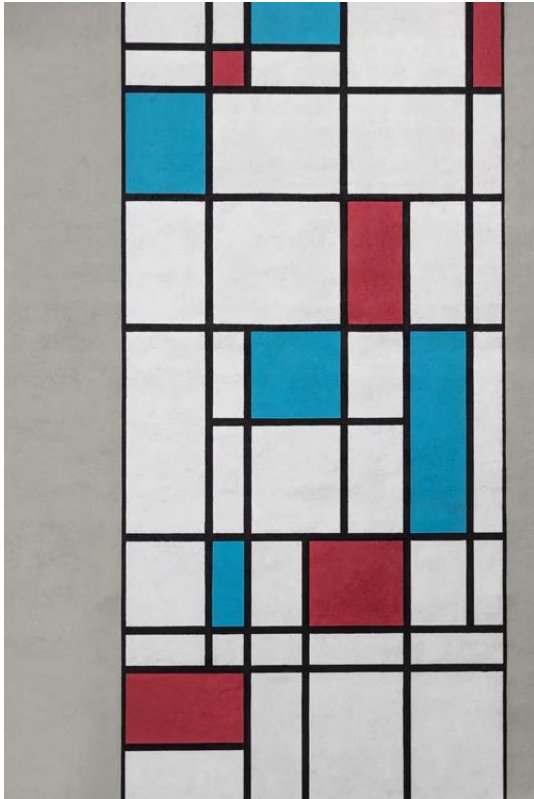
## Launch

Use math words to describe this picture.

## Grade 1

Where do you see halves in the picture?  
Where could you draw lines to show quarters in the picture?





<b>Grade K</b>	Describe the shapes you see. What are some things that are the same? What are some things that are different? (K.G.B.4)
<b>Grade 1</b>	Where do you see halves in the picture? Where could you draw lines to show quarters in the picture? (1.G.A.3)
<b>Grade 2</b>	Where could you draw lines to show thirds in the picture? (2.G.A.3)
<b>Grade 3</b>	Where could you draw lines and how could you shade to show $\frac{2}{3}$ and $\frac{2}{4}$ in the picture? Which is larger in area, the $\frac{2}{3}$ you drew or the $\frac{2}{4}$ ? Explain. (3.NF.A.1 and 3.NF.A.3)
<b>Grade 4</b>	One of the blue rectangles has an area of $\frac{5}{8}$ square foot and another has an area of $\frac{2}{3}$ square foot. Write a comparison using $<$ , $>$ , or $=$ to compare $\frac{5}{8}$ and $\frac{2}{3}$ . (4.NF.A.2)
<b>Grade 5</b>	The total area of blue in the painting is $3\frac{2}{3}$ square foot. The total area of red in the painting is $2\frac{1}{4}$ square foot. What is the difference between these two total areas in square feet? (5.NF.A.1)



### Launch

What can you count in the picture? Show how you would count them.

**Grade  
5**

Fun fact: The height of the world's tallest umbrella is about 588 inches. How many feet is that?



<p><b>Grade K</b></p>	<p>Complete this sentence: _____ is shorter than _____. (K.MD.A.2)</p>
<p><b>Grade 1</b></p>	<p>Where do you see 4-sided shapes in the picture? Are they all the same size or different sizes? (1.G.A.1)</p>
<p><b>Grade 2</b></p>	<p>Where do you see rectangles partitioned into equal sized pieces? How many equal pieces do you see? (2.G.A.3)</p>
<p><b>Grade 3</b></p>	<p>Do you think there are more rectangles or rhombuses in the picture? Explain. (3.G.A.1)</p>
<p><b>Grade 4</b></p>	<p>What kinds of angles do you see in the picture? How does an umbrella connect to what you know about circles and angles? (4.MD.C.5)</p>
<p><b>Grade 5</b></p>	<p>Fun fact: The height of the world's tallest umbrella is about 588 inches. How many feet is that? (5.MD.A.1)</p>



### Launch

What questions do you have about this picture?

**Grade  
1**

Find three numbers in the picture that can add up to 15.  
Write an equation to show your thinking.





<p><b>Grade K</b></p>	<p>What numbers do you see? Say their names. Can you write them? (K.CC.A.3)</p>
<p><b>Grade 1</b></p>	<p>Find three numbers in the picture that can add up to 15. Write an equation to show your thinking. (1.OA.A.2)</p>
<p><b>Grade 2</b></p>	<p>What is the sum of the two greatest numbers you see? (2.NBT.B.7)</p>
<p><b>Grade 3</b></p>	<p>What patterns do you see in the numbers on the dial on the left? (3.OA.D.9)</p>
<p><b>Grade 4</b></p>	<p>The <i>odometer</i> on the left shows a number that is greater than 60,000. Write this number in words and in expanded form. (4.NBT.A.2)</p>
<p><b>Grade 5</b></p>	<p>Use parentheses, two different operations and three of the numbers on the dials to create an expression equivalent to 150. (5.OA.A.1)</p>



### Launch

What shapes do you see in the picture?

**Grade  
2**

Where do you see halves, thirds, or fourths in the picture?







<p><b>Grade K</b></p>	<p>What shapes do you see in the picture? What is the same about the shapes? What is different? (K.G.A.2 and K.G.B.4)</p>
<p><b>Grade 1</b></p>	<p>What shapes do you see in the picture? Where do you see halves and fourths on the shapes? (1.G.A.3)</p>
<p><b>Grade 2</b></p>	<p>What shapes do you see in the picture? Where do you see halves, thirds, and fourths on the shapes? (2.G.A.3)</p>
<p><b>Grade 3</b></p>	<p>What shapes do you see in the picture? Draw the shapes and break them up into parts with equal areas. Explain how you know the parts have equal areas. (3.G.A.2)</p>
<p><b>Grade 4</b></p>	<p>Each window has an area of about 18 square feet. Each pane is <math>\frac{1}{8}</math>th of the window's area. What is the area, in square feet, of one pane of the window? (4.NF.B.4)</p>
<p><b>Grade 5</b></p>	<p>The perimeter of each window is <math>213\frac{1}{2}</math> inches, and the width of each window is <math>35\frac{1}{8}</math> inches. What is the length, in inches, of each window? (5.NF.A.1)</p>



### Launch

What do you notice?

What do you wonder?

**Grade**  
**3**

Each of the 2 large gold bracelets has 20 white stones and 30 red stones.  
How many stones in all on these 2 bracelets?



<b>Grade K</b>	Count the fingers you see in the picture. Say the number each time you point to a finger. (K.CC.B.4)
<b>Grade 1</b>	How many more slim red bracelets are there than large gold bracelets? (1.OA.A.1)
<b>Grade 2</b>	When Priya puts 20 bracelets on her two wrists she likes to find different ways to group the bracelets. One way she can put them on is to have 10 on her right wrist and 10 on her left wrist. What are some other ways Priya can put on her 20 bracelets? (2.OA.B.2)
<b>Grade 3</b>	Each of the 2 large gold bracelets has 20 white stones and 30 red stones. How many stones in all on these 2 bracelets? (3.NBT.A.3 and 3.OA.D.8)
<b>Grade 4</b>	The slim gold bracelets each have 24 white stones. How many white stones would be on 12 slim gold bracelets? (4.NBT.B.5)
<b>Grade 5</b>	The 2 large gold bracelets with red stones are priced at \$89.10 each, and the center large gold bracelet is priced at \$78.50. What is the total price to buy all 3 of these bracelets? (5.NBT.B.7)



# Talking Math

Day 81



## Launch

What shapes do you see in the picture?

**Grade**

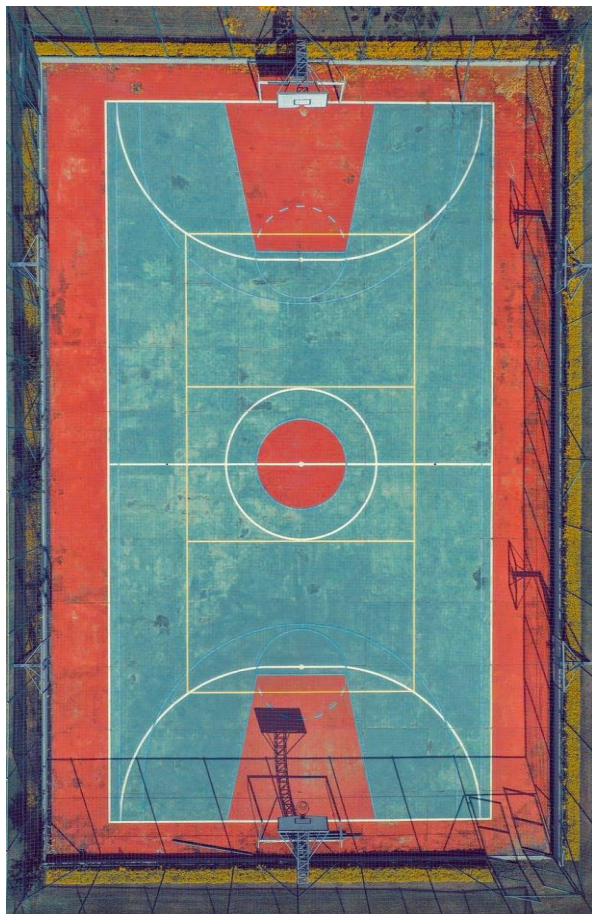
**1**

There are 24 blue triangles in the picture.  
What number is 10 more than 24?  
What number is 10 less than 24?  
Explain how you know.





<b>Grade K</b>	Are there more orange triangles or more green triangles? (K.CC.C.6)
<b>Grade 1</b>	There are 24 blue triangles in the picture. What number is 10 more than 24? What number is 10 less than 24? Explain how you know. (1.NBT.C.5)
<b>Grade 2</b>	There are 9 green triangles in the mural, what adds to 9 to make 20? Explain how you know. (2.OA.B.2)
<b>Grade 3</b>	The mural has about $2 \times 40$ triangles in it. What is $2 \times 40$ ? (3.NBT.A.3)
<b>Grade 4</b>	There are 3 times as many blue triangles as there are yellow triangles. Write a multiplication equation to represent the comparison of blue and yellow triangles. (4.OA.A.1)
<b>Grade 5</b>	There are 24 blue triangles in the picture. Explain how this expression, $(9 \times 2) + 6$ , represents the number of blue triangles compared with the number of green triangles in the picture. (5.OA.A.2)

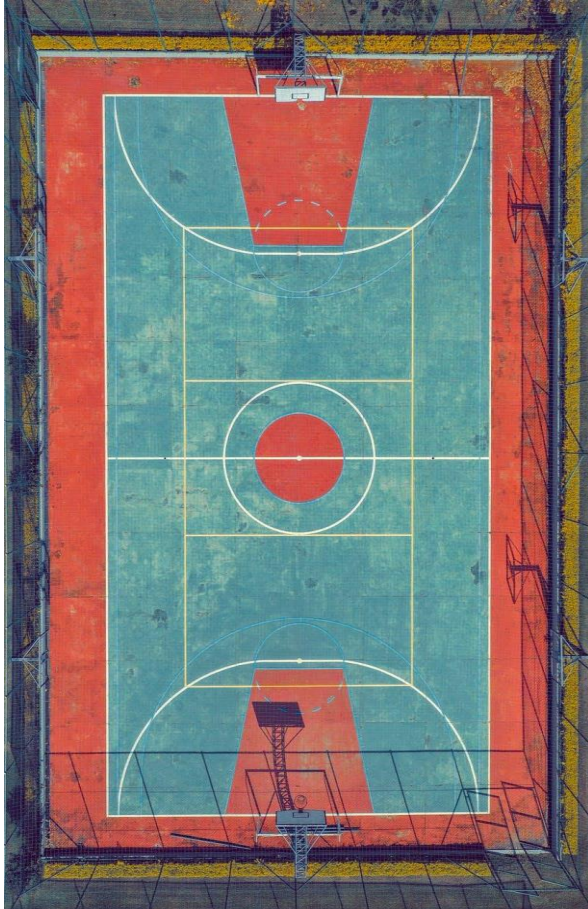


## Launch

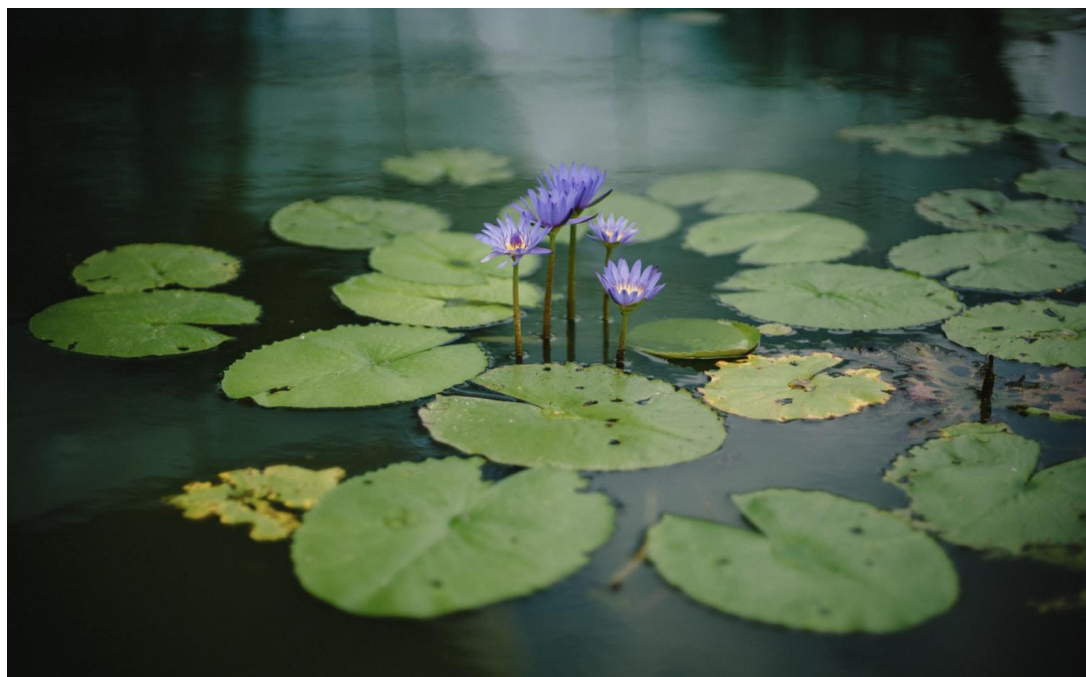
Tell a story about what happened after this picture was taken.

**Grade  
4**

Find any lines of symmetry in the picture.



<p><b>Grade K</b></p>	<p>What shapes do you see? Can you trace them or draw them? (K.G.1)</p>
<p><b>Grade 1</b></p>	<p>What shapes do you see that are composed of other shapes? Can you trace them or draw them? (1.G.2)</p>
<p><b>Grade 2</b></p>	<p>Where do you see halves or fourths in the picture? Trace or draw them. (2.G.3)</p>
<p><b>Grade 3</b></p>	<p>How many quadrilaterals do you see in the picture? Describe them and name them. (3.G.1)</p>
<p><b>Grade 4</b></p>	<p>Find any lines of symmetry in the picture. Where could other lines of symmetry be drawn? (4.G.3)</p>
<p><b>Grade 5</b></p>	<p>Choose a shape in the picture and list at least 3 of its attributes. Consider using such words as sides, angles, and vertices. (5.G.3)</p>



### Launch

What do you notice?

What do you wonder?

**Grade**  
**3**

There are about 30 lily pads grouped in the picture.  
How many lily pads would there be in 6 such groups?







<b>Grade K</b>	How many lily pads do you see? (K.CC.A.1) How many flowers do you see? How many more flowers are needed to make 10? (K.OA.A.4)
<b>Grade 1</b>	After a turtle ate 12 flowers, these are the flowers that were left. How many flowers were there before the turtle ate 12 flowers? Write an equation to show your thinking. (1.OA.A.1)
<b>Grade 2</b>	There are 26 lily pads in the grouping in the picture. How many lily pads would there be in 2 such groups? (2.OA.A.1)
<b>Grade 3</b>	There are about 30 lily pads grouped in the picture. How many lily pads would there be in 6 such groups? (3.NBT.A.3)
<b>Grade 4</b>	The 58 species of water lilies are divided into 6 biological groups. About how many species are in each group if they are divided equally? (4.NBT.B.6)
<b>Grade 5</b>	Most of these lily pads are 12.4 centimeters across. How far would a frog have to jump to leap over 3 of the lily pads in a row? (5.NBT.B.7)



### Launch

What questions can you ask about this picture?

**Grade  
2**

A domino has 4 equal angles. It also has 2 longer sides and 2 shorter sides.  
What shape is a domino?





<p><b>Grade K</b></p>	<p>Imagine sorting the dominoes by yellow, pink, and blue colors. How many are in each group? (K.MD.B.3)</p>
<p><b>Grade 1</b></p>	<p>How many different shapes can you compose from 3 dominoes? Use three dominoes or cut out 3 rectangles of paper and find out. (1.G.A.2)</p>
<p><b>Grade 2</b></p>	<p>A domino has 4 equal angles. It also has 2 longer sides and 2 shorter sides. What shape is a domino? (2.G.A.1)</p>
<p><b>Grade 3</b></p>	<p>What shape is a domino? What other shapes can you draw with 4 sides? How are they the same? How are they different? (3.G.A.1)</p>
<p><b>Grade 4</b></p>	<p>Where do you see dots that could be connected to make parallel line segments? Where are dots that could connect to make perpendicular line segments? (4.G.A.1)</p>
<p><b>Grade 5</b></p>	<p>A domino is shaped like a rectangle which is a quadrilateral. What attributes make a quadrilateral a rectangle? Describe and draw 2 quadrilaterals which are <i>not</i> rectangles. (5.G.B.3 and 5.G.B.4)</p>



### Launch

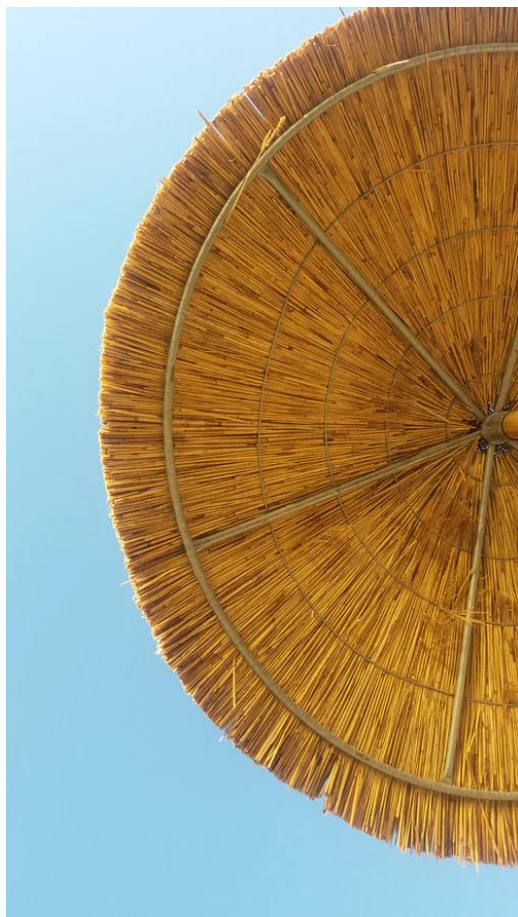
What questions do you have about this picture?

**Grade**  
**K**

How many kittens are there in the picture?  
How many more would make 10?



<b>Grade K</b>	How many kittens are there in the picture? How many more would make 10? (K.OA.A.4)
<b>Grade 1</b>	If 7 more kittens came to join these kittens, how many would there be? (1.OA.C.6)
<b>Grade 2</b>	One of the kittens is 18 centimeters long. Another kitten is 10 centimeters longer than that. How long is the longer kitten? (2.NBT.B.8)
<b>Grade 3</b>	A kitten at six weeks of age can weigh about 560 grams. What are three possible weights for a kitten that would round to 560 grams? (3.NBT.A.1)
<b>Grade 4</b>	A kitten at six weeks of age can weigh close to 2 pounds. An adult cat is usually 4 or 5 times heavier than a kitten. What could be a typical weight range for an adult cat? (4.OA.A.2)
<b>Grade 5</b>	These are the weights, in kilograms, of the kittens: 0.51, 0.77, 0.75, 0.57, and 0.70 Use $<$ and $>$ to write 3 different comparisons about some of the weights of the kittens. (5.NBT.A.3)



## Launch

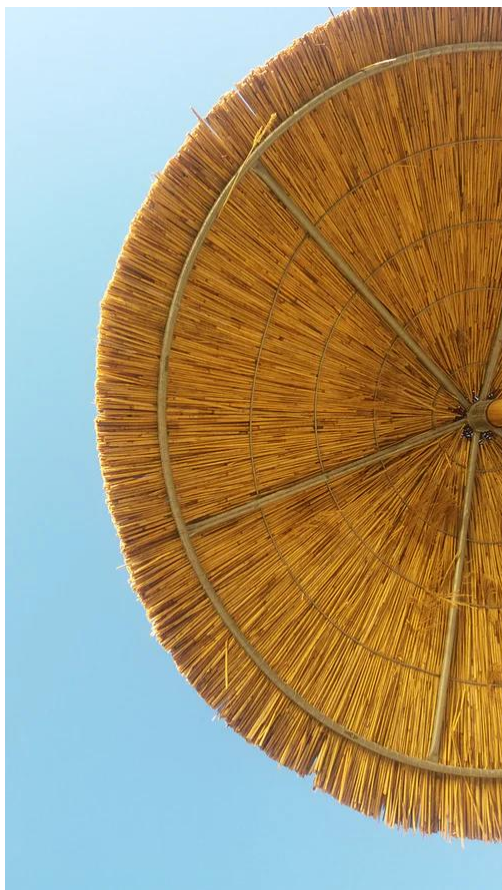
What do you notice?

What do you wonder?

## Grade 5

The bamboo pole that holds up the center of this straw umbrella is 178 centimeters long.

What is this length in millimeters? What is this length in meters?



<b>Grade K</b>	What shapes do you see in the picture? Describe them. Tell how they are alike and how they are different. (K.G.A.1)
<b>Grade 1</b>	What shapes made up of smaller shapes do you see in the picture? Describe them. (1.G.A.2)
<b>Grade 2</b>	In this picture we see only part of a circular straw umbrella. Do you think we see half of the umbrella? Explain. (2.G.A.3)
<b>Grade 3</b>	In this picture we see part of a circular straw umbrella that is divided by sticks into equal parts. What fraction of the umbrella do you think is each part? Explain. (3.G.A.2)
<b>Grade 4</b>	Identify where in the picture you see rays, endpoints, and angles. What kind of angles do you see? (4.MD.C.5 and 4.G.A.2)
<b>Grade 5</b>	The bamboo pole that holds up the center of this straw umbrella is 178 centimeters long. What is this length in millimeters? What is this length in meters? (5.MD.A.1)



### Launch

What is familiar about the picture?

What questions do you have about the picture?

**Grade  
2**

Where do you see arrays in the picture?  
Describe them.  
What addition equation shows what you see?





<b>Grade K</b>	What can you count in the picture? Say what you counted and write the number that shows how many. (K.CC.B.5 and K.CC.A.3)
<b>Grade 1</b>	There is 1 dog walking with the girls in the picture. If there were 6 dogs walking with the girls earlier, how many dogs left? (1.OA.A.1)
<b>Grade 2</b>	Where do you see arrays in the picture? Describe them. What addition equation shows what you see? (2.OA.C.4) The fare to ride the bus is \$2.35. What coins could be used to get a ride on the bus? Explain. (2.MD.C.8)
<b>Grade 3</b>	Where do you see arrays in the picture? Describe them. What multiplication equation shows what you see? (3.OA.A.3)
<b>Grade 4</b>	The bus in the picture has 13 rows of 4 seats and 1 row of 6 seats. When 62 people are on the bus how many people will <b>not</b> have a seat? (4.OA.A.3)
<b>Grade 5</b>	Write an expression to represent the following situation: The bus in the picture has 13 rows of 4 seats and 1 row of 6 seats. When 62 people are on the bus how many 185 people will <b>not</b> have a seat?



## Launch

What questions do you have about this picture?

## Grade K

Complete the sentences about the picture:  
The lightest thing I see is

\_\_\_\_\_.

The heaviest thing I see is \_\_\_\_\_.



<p><b>Grade K</b></p>	<p>Complete the sentences about the picture:            The lightest thing I see is _____.            The heaviest thing I see is _____.            (K.MD.A)</p>
<p><b>Grade 1</b></p>	<p>Complete the sentences about the picture:            The _____ is taller than the _____.            The _____ is shorter than the _____.            The _____ is heavier than the _____.            (1.MD.A.1)</p>
<p><b>Grade 2</b></p>	<p>Complete the sentences about the picture:            A ruler would be best for measuring _____.            A meter stick would be best for measuring _____.            A tape measure would be best for measuring _____.            (2.MD.A.1)</p>
<p><b>Grade 3</b></p>	<p>Complete the sentences about the picture:            The _____ could have a weight of about 3 grams.            The _____ could have a weight of about 3 kilograms.            The _____ could have a weight of about 60 kilograms.            (3.MD.A.2)</p>
<p><b>Grade 4</b></p>	<p>A typical skateboard can weigh about 4 pounds. How many ounces is this? (There are 16 ounces in a pound)            (4.MD.A.2)</p>
	<p>A typical skateboard is 75 centimeters long. How long, in centimeters, would a line of 6 skateboards, all lined</p>



### Launch

Tell a story about what happened after this picture was taken.

**Grade**  
**3**

Some of these bunnies weigh 232 grams each and some of the bunnies weigh 167 grams each. What are each of these weights rounded to the nearest ten grams?



<p><b>Grade K</b></p>	<p>How many bunnies do you see eating the grass? Write the number (K.CC.3)</p>
<p><b>Grade 1</b></p>	<p>Before the picture was taken there were 13 bunnies on the grass, then some bunnies hopped away. How many bunnies hopped away? Write an equation to show your thinking. (1.OA.1)</p>
<p><b>Grade 2</b></p>	<p>We see 5 bunnies eating the grass. Count by fives to 70. (2.NBT.2)</p>
<p><b>Grade 3</b></p>	<p>Some of these bunnies weigh 232 grams each and some of the bunnies weigh 167 grams each. What are each of these weights rounded to the nearest ten grams? (3.NBT.A.1)</p>
<p><b>Grade 4</b></p>	<p>Three of these bunnies weigh 232 grams each and two of the bunnies weigh 167 grams each. Find the weight of all five bunnies. (4.NBT.B.4)</p>
<p><b>Grade 5</b></p>	<p>The largest rabbit recorded weighed about 55.2 pounds. What is this weight in ounces? (1 pound = 16 ounces) (5.NBT.B.7 and 5.MD.A.1)</p>



### Launch

What do you notice?

What do you wonder?

**Grade**  
**1**

If the box of crayons is full, are there more colored pencils or crayons? Explain how you know.



<b>Grade K</b>	How could you sort the items in the picture? How many in each group? (K.MD.B.3)
<b>Grade 1</b>	If the box of crayons is full, are there more colored pencils or crayons? Explain how you know. (1.MD.C.4)
<b>Grade 2</b>	These are the lengths, to the nearest inch, of some of the pencils in the picture: Pink 4 inches Yellow 4 inches Maroon 4 inches Green 3 inches Blue 4 inches Describe how you would make a line plot about the lengths of these pencils. (2.MD.D.9)

Prompts for grades 3-5 are on the following slide.



<b>Grade 3</b>	<p>These are the lengths, to the nearest quarter of an inch, of some of the pencils in the picture:</p> <p>Pink <math>3\frac{3}{4}</math> inches Yellow <math>4\frac{1}{4}</math> inches Maroon <math>3\frac{3}{4}</math> inches Green <math>3\frac{1}{4}</math> inches Blue <math>4\frac{1}{2}</math> inches</p> <p>Describe how you would make a line plot about the lengths of these pencils. (3.MD.B.4)</p>
<b>Grade 4</b>	<p>These are the lengths, to the nearest eighth of an inch, of some of the pencils in the picture:</p> <p>Brown <math>3\frac{1}{8}</math> inches Gold <math>2\frac{1}{4}</math> inches Gray <math>2\frac{1}{8}</math> inches Blue <math>4\frac{3}{8}</math> inches</p> <p>Describe how you would make a line plot about the lengths of these pencils. (4.MD.B.4)</p>
<b>Grade 5</b>	<p>Use the lengths given in the grade 4 prompt to determine the measure of a line made of all the pencils lined up end to end. (5.NF.A.1)</p>





### Launch

What questions do you have about this picture?

**Grade  
3**

If these books were divided equally into 3 boxes, how many books would be in each box?



# Talking Math

Day 91



<b>Grade K</b>	How many books do you see? (K.CC.B.2)
<b>Grade 1</b>	How many more books would make 20 books? (1.OA.A.1)
<b>Grade 2</b>	These books were left after Elena gave away 21 books, how many books were there before Elena gave 21 away? Write an equation to show your thinking. (2.OA.A.1)
<b>Grade 3</b>	If these books were divided equally into 3 boxes, how many books would be in each box? (3.OA.A.3)
<b>Grade 4</b>	There are 3,502 pages in all of these books. What is this number of pages rounded to the nearest ten? To the nearest hundred? To the nearest thousand? (4.NBT.A.3)
<b>Grade 5</b>	The tallest blue book is 26.03 centimeters long. The shortest blue book is 19.8 centimeters long. What is the total length, in centimeters, of these two blue books? (5.NBT.B.7)





### Launch

What shapes do you see in the picture?

**Grade**  
**4**

If each of the squares has a side length of 10 inches, what is the perimeter of a rectangle composed of 5 of the squares?





<p><b>Grade K</b></p>	<p>What shapes do you see? How would you describe them? (K.G.A and K.G.B)</p>
<p><b>Grade 1</b></p>	<p>Complete the sentences to describe what you see: The _____ shape has _____. The _____ shape is made up of _____. (1.G.A)</p>
<p><b>Grade 2</b></p>	<p>Complete the sentences: I know I see quadrilaterals in the picture because _____. I know I see rectangles in the picture because _____. I know I see squares in the picture because _____. (2.G.A.1)</p>
<p><b>Grade 3</b></p>	<p>If each of the squares has a side length of 10 inches, what is the area of one of the squares? (3.MD.C.7)</p>
<p><b>Grade 4</b></p>	<p>If each of the squares has a side length of 10 inches, what is the perimeter of a rectangle composed of 5 of the squares? ( 4.MD.A.3)</p>
<p><b>Grade 5</b></p>	<p>If each of the squares has a side length of about 25.5 centimeters, what is the perimeter of one of the squares in <b>meters</b>? (5.MD.1)</p>



### Launch

What questions can you ask about this picture?

### Grade 1

What shapes show halves and fourths in the picture?



<b>Grade K</b>	What can you count in the picture? Clap as you count how many. (K.CC.B.5 and K.OA.A.1)
<b>Grade 1</b>	What shapes show halves and fourths in the picture? (1.G.A.3)
<b>Grade 2</b>	What shapes do you see in the picture? Draw the shapes and show halves, thirds, and fourths on the shapes. (2.G.A.3)
<b>Grade 3</b>	What shapes do you see in the picture? Draw the shapes and break them up into parts with equal areas. Explain how you know the parts have equal areas. (3.G.A.2)
<b>Grade 4</b>	Each of the white shades completely covering a window has an area of about 1112 square yard. What is the area, in square yards, of all 7 of them? (4.NF.B.4)
<b>Grade 5</b>	Each of the white shades completely covering a window has an area of about 834 square feet. What is the area, in square feet, of all 7 of them? (5.NF.B.6)



## Launch

Tell a story about what happened after this picture was taken.

**Grade  
5**

How many different types of quadrilaterals do you see?

Name them.

How are they the same?

How are they different?



<b>Grade K</b>	<p>What shapes do you see? Are they flat or solid? (K.G.A.2 and K.G.A.3)</p>
<b>Grade 1</b>	<p>What shapes do you see? What smaller shapes make up the larger shapes? (1.G.A.2)</p>
<b>Grade 2</b>	<p>How many rectangles do you see? Can you find a triangle or a hexagon in the picture? (2.G.A.1)</p>
<b>Grade 3</b>	<p>Where do you see quadrilaterals in the picture? What are more specific names for the quadrilaterals you see? (3.G.A.1)</p>
<b>Grade 4</b>	<p>Where do you see parallel and perpendicular lines? Where do you see acute, obtuse, and right angles? (4.G.A.1)</p>
<b>Grade 5</b>	<p>How many different types of quadrilaterals do you see? Name them. How are they the same? How are they different? (5.G.B.3)</p>





### Launch

What do you notice?

What do you wonder?

**Grade  
2**

There are rulers in this picture.  
What can you measure with a ruler?  
What can you **not** measure with a ruler?



<b>Grade K</b>	Find some of these objects in your home. Find one object that feels lighter than another object. Explain your thinking. (K.MD.A.2)
<b>Grade 1</b>	Find some of these objects in your home. How many pencils are equal in length to your scissors? How many pencils are equal in length to your ruler? (1.MD.A.2)
<b>Grade 2</b>	There are rulers in this picture. What can you measure with a ruler? What can you <b>not</b> measure with a ruler? (2.MD.A.1)
<b>Grade 3</b>	Find 3 of the objects similar to those in the picture in your home. Measure them to the nearest half an inch.(3.MD.B.4)
<b>Grade 4</b>	The longer paint brushes in the picture are about 35 centimeters long. Can paint brushes be measured in meters? Explain. (4.MD.A.1)
<b>Grade 5</b>	If all the pencils in the picture were lined up end to end, they would make a line about 1900 centimeters long. What is this measure in meters? Explain.(5.MD.A.1)