Time Practice

Time Practice

Cameron got on his four wheeler at 3:30. He raced around with his sister until 4:35. How long did Cameron and his sister race? Write your answer in minutes.

Ellie got to school at 7:30. She then got home at 2:45. How long was Ellie at school? Write your answer in minutes.

Mrs. Gilbert started softball practice at 1:47. She practiced with Ms. Smith until 3:16. How long did Mrs. Gilbert and Ms. Smith practice for? Write your answer in minutes.

Natalie and her family left her house for the airport at 2:15. They got there at 3:02. They then waited for her mom until 3:15. They picked her mom up and drove home. They finally made it home at 4:23. How long was Natalie and her family gone for? Write your answer in minutes.

Time Practice

It took Jahayra 23 minutes to walk to school. She got there at 7:32. What time did Jahayra leave her house?

Sterling and his dad started playing video games at 1:16. They played for 63 minutes. What time did Sterling and his dad finish?

Paxton and Ryder left for soccer practice at 3:31. They practiced for 30 minutes. Then they stopped for dinner, which took about 29 minutes. It took them 22 minutes to drive home. What time did they arrive home? How many total minutes elapsed since they left their house?

Warren and his sister practiced playing the piano until 6:45. If they practiced for 68 minutes, what time did they start?

Fraction Practice

What fractions are less than....

⁷⁄₈

6/8

³⁄₄

2/4

⁵⁄₈

⅛

⅔

6/4

What relationships do you notice?
What is something that is ALWAYS true?

What fractions are greater than....

2/4

⅓

¼

2/8

⅔

4/8

2/6

What relationships do you notice?
What is something that is ALWAYS true?

What fractions are equal to...

2/4

⅓

¼

2/8

3/6

4/8

½

What relationships do you notice?
What is something that is ALWAYS true?

Mrs. Gilbert's class wants to share cake! How much of the cake would each student get?

1 cake cut into 8 pieces shared with 4 students
1 cake cut into 9 pieces shared with 3 students
1 cake cut into 5 pieces shared with 10 students
1 cake cut into 6 pieces shared with 12 students
1 cake cut into 4 pieces shared with 12 students
1 cake cut into 5 pieces shared with 15 students

How many will it take?

Mrs. Gilbert is wanting to run one mile. If each lap around the track is ¼ of a mile, how many laps will she need to run?

What will make the equation below true?

$$\frac{\square}{4} = 1 \qquad \frac{\square}{4} = 2 \qquad \frac{\square}{4} = 3$$

$$\frac{\square}{4} = 6$$

$$\frac{\square}{8} = 1 \qquad \frac{\square}{8} = 2$$

$$\frac{\square}{8} = 4$$

What if every lap around the track was 1 mile long?

$$\frac{\square}{1} = 1 \qquad \frac{\square}{1} = 2$$

$$\frac{\square}{1} = 7$$

Multiple Step Problems

Two Step Word Problems

Ryder has 6 pizzas. Each pizza has 8 slices. If he and his friends eat 12 slices of pizza, how many slices are left? **Solve the problem and write an equation to represent it.**

Paxton has 48 candies and Steele has 24 candies. If they put their candies together and then share them equally between themselves and their 4 friends, how many candies will they each get? **Solve the problem and write an equation to represent it.**

Cheyenne has 10 packs of markers with 6 markers in each pack. If she gives each of her friends 2 markers, how many friends can have markers? **Solve the problem and write an equation to represent it.**

Two Step Word Problems

Cameron has 32 pieces of candy. He eats 4 of them. He shares the remaining candies equally with 7 friends. How many candies will each friend get?

The class is having birthday celebrations! Ellie brought 2 packs of cookies with 12 in each pack. Favour brought 4 packs of 8 cupcakes. Macey brought 3 packs of 10 candies. Brook brought 5 packs of 5 juice pouches. How many treats do they have in all? Who brought the most? Who brought the least?
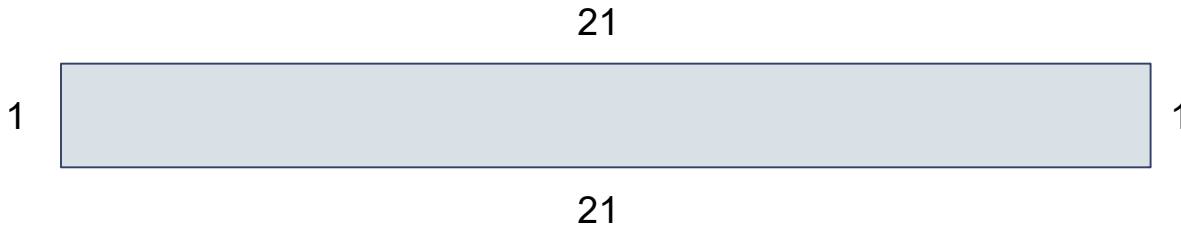
Area & Perimeter

Open Middle Warm Up

Rectangles: Maximizing Area

What is the greatest area you can make with a rectangle that has a perimeter
of 24 units?

P= 1+21+1+21=24

A= 21x1=21

21

1   1

21

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Open Middle Warm Up

Area Models & Greatest Perimeter

You are laying concrete for your patio but want to decide which layout is the best. How many rectangular patios can you create with 32 square feet?

Which patio would you choose to build? Why?
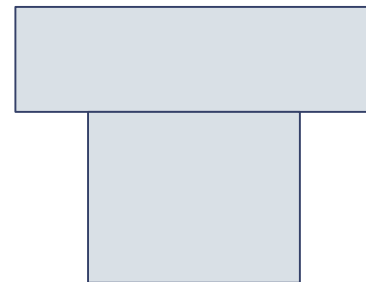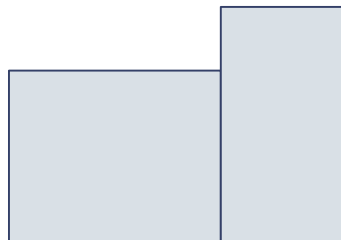Which has the greatest perimeter? Which has the smallest perimeter?

Math Task Warm Up

Area Models

You are laying concrete for your patio but want to decide which layout you like the most first. How many patios can you create with a total of 36 square feet by composing two rectangles together?

Which patio would you choose to build? Why?

Bedrooms Galore!

Kids in Mrs. Gilbert's class went home and measured their bedrooms. Here are the dimensions of their rooms.

- Brooklyn: 11 feet by 8 feet
- Cameron: 12 feet by 7 feet
- Natalie: 13 feet by 8 feet
- Warren: 16 feet by 5 feet

Find the area and perimeter of each bedroom.

Which bedroom has the largest area? Which bedroom has the smallest area?

Which bedroom has the largest perimeter? Which bedroom has the smallest perimeter?

What is the total area of all of the rooms?

Multiplication & Division

Multiplication & Division Practice

Kason had 24 pencils in his art room. He wants to put them equally in 4 containers. How many pencils can go in each container? Solve using any method and write a division AND multiplication equation to match this problem.

Ryder is baking cookies. He made 3 batches of 12 chocolate chip cookies. He also made 4 batches of 8 sugar cookies. How many total cookies did Ryder make? Solve using any method and write an equation that matches the problem.

Brook has 36 cookies. She wants to share them equally with her 12 friends. How many cookies can she give to each of her friends? Solve using any method and write a division AND multiplication equation to match this problem.

Macey and her friends ran 48 total laps on Wednesday. If they each ran 6 laps, how many total people ran laps? Solve using any method and write a division AND multiplication equation to match this problem.

Each student in Mrs. Gilbert's class brought her 6 flowers. How many total flowers did Mrs. Gilbert get? Solve using any method and write a division AND multiplication equation to match this problem.

Distributive Property Practice!

Cheyenne has a 4 bags of pencils. There are 3 red pencils and 2 green pencils in each bag. How many pencils are there?

(4x4)+(4x5)=**n**

(3x2)+(3x6)=**n**

n=(6x5)+(6x5)

n=(7x3)+(7x2)

n=(5x6)+(5x7)

(8x4)+(8x2)=**n**

n=(7x4)+(7x3)

Use the distributive property to solve

n=6x6

8x9=**n**

6x9=**n**

12x5=**n**

n=16x3

n=5x9

14x5=**n**

12x8=**n**

Distributive Property Practice

Create an area model for the following equations and use distributive property to solve

5x5=25
4x5=20

9

5

Example:

5x9=

5x5=25

4x5=20

(5x4)+(5x5)=45
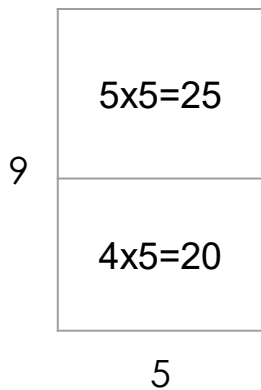
- 5x8
- 6x7
- 6x9
- 8x7
- 12x4
- 12x6
- 13x5
- 14x4

Associative Property Practice!

Hayden has 3 boxes of crayons with 5 different colors. There are 2 of each color crayon in each box. How many total color crayons are there?

$7 \times 7 \times 2 = \mathbf{n}$

$2 \times 6 \times 2 = \mathbf{n}$

$5 \times 2 \times 6 = \mathbf{n}$

$2 \times 7 \times 2 = \mathbf{n}$

$10 \times 6 \times 3 = \mathbf{n}$

$\mathbf{n} = 2 \times 8 \times 3$

$\mathbf{n} = 7 \times 4 \times 3$

$\mathbf{n} = 12 \times 3 \times 2$

$5 \times 6 \times 3 = \mathbf{n}$

$\mathbf{n} = 10 \times 3 \times 5$

Associative Property Practice!

Hayden has 2 boxes of crayons with 5 different colors. There are **n** of each color crayon in each box. If there are 20 total crayons, how many of copies of each crayon are there?

$4x2xn=32$

$36=6x2xn$

$7xnx2=42$

$25=5xnx5$

$10xnx3=150$

$7xnx10=210$

$6xnx10=180$

$nx9x4=73$

$nx3x3=81$

$nx3x6=54$

$72=4x2xn$

Associative Property Practice!

$2 \times 5 \times 2 = n$

$2 \times 8 \times 2 = n$

$n = 2 \times 6 \times 3$

$3 \times 2 \times n = 30$

$24 = 4 \times 2 \times n$

$8 \times n \times 2 = 32$

$25 = 5 \times n \times 5$

$10 \times n \times 3 = 150$

$5 \times n \times 10 = 200$

$6 \times n \times 10 = 180$

$n \times 2 \times 4 = 48$

$n \times 3 \times 3 = 81$

$n \times 3 \times 6 = 54$

Missing Variables & Fact Families

$n \times 2 = 16$

$6 \times n = 36$

$n \times 8 = 48$

$n \times 15 = 150$

$48 \div 8 = n$

$16 \div n = 4$

$28 \div n = 7$

$n \div 4 = 3$

10 rule practice

10x5=

5x20=

6x40=

8x20=

7x30=

20x9=
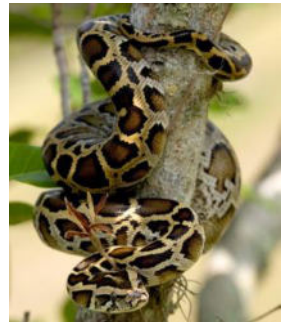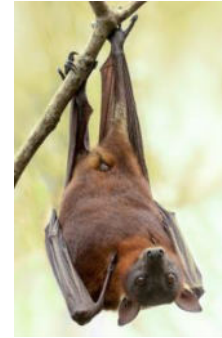
50x6=

Creating & Interpreting a Graph

How many hours in a 24-hour day do animals sleep?

- Giraffe - 2 ½ hours
- Elephant - 3 ½ hours
- Human - 8 hours
- Dog - 10 ½ hours
- Cat - 13 hours
- Squirrel - 15 hours
- Python - 18 hours
- Brown Bat - 20 hours

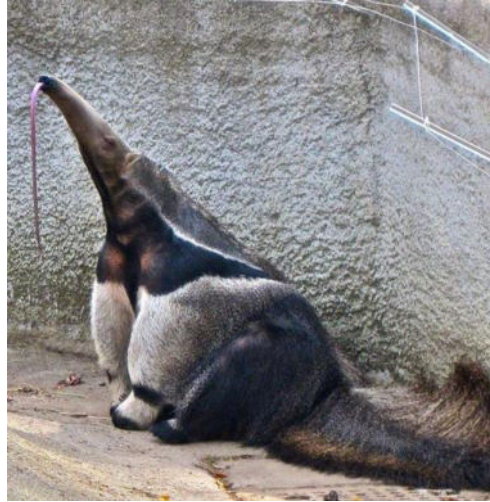Create a graph using this data.

How long are animal tongues?

- Giant anteater - 24 inches
- Chameleon - 21 inches
- Giraffe - 20 inches
- Morgan's sphinx moth - 12 inches
- Sun bear - 10 inches
- Tube-lipped nectar bat - 3 ⅓ inches

Miscellaneous

Number Palindromes

A palindrome is a word that is the same forward as backwards. (dad, bob, mom).

Numbers can be palindromes too! For example, 313, 7997, 11, and 6 are all palindromes.

24+42=66. That's a palindrome!

17+71=88 is also a palindrome!

Any number forwards and backwards is always a palindrome!! Is that always the case?

https://mathforlove.com/lesson/number-palindromes/

Number Palindromes — Teacher Information

Topics: Addition, Base 10, Logic
Materials: Paper and pencil, Number Palindrome sheet
Common Core: 3.NBT.A.2, 4.NBT.B.4, MP1, MP3, MP7, MP8

Palindromes are numbers that read the same forward as backward, like 10,501. When you add a number (24, say) to its reverse (42) you often get a palindrome (66). Does this always work? This lesson is an exploration of that question and its consequences.

Why We Love Number Palindromes

This extraordinary lesson hammers home how base ten and multi-digit addition work with an irresistible mystery. A pattern slowly reveals itself as the class compiles data, and calculations grow slowly more difficult as students make their way forward. The lesson ends with a serious challenge, and a connection to an unsolved problem in mathematics.

The Launch

Teacher: A palindrome is a word that is the same forward as backward. For example, mom, dad, and bob are all palindromes. Does anyone else know a palindrome? [Students contribute ideas and ask questions. Possible palindromes include words like *racecar*, or phrases like *taco cat*.]

Teacher: Numbers can be palindromes too, if they are the same forward and backward. For example, 313; 7997; 11; and 6 are palindromes. Can anyone else think of a number palindrome? [Students contribute number palindromes.]

Teacher: Now here is an amazing thing. Let's take a number that isn't a palindrome, say 24 [writes 24]. How do I know it is not a palindrome? Because if I turn it around, I get 42 [writes 42]. So I have these two numbers, 24 and 42… what happens if I add them together? [Adds 24 + 42] I get 66. And 66 is a palindrome! Will this always work? Let's try another, say 17. The reverse of 17 is 71, and if I add 17 + 71, I get 88, a palindrome! I'm going to go out on a limb and conjecture that whenever I add a number to its reverse I get a palindrome. Can anyone prove me wrong? Take 2 minutes and try to find a counterexample. [Students work independently for two minutes]

Teacher: Did anyone disprove my conjecture? Or does it hold up? [Take student comments and counterexamples.] So my conjecture isn't true. For example, 19 + 91 = 110, and 110 isn't a palindrome. But what if… what's the reverse of 110? I guess it is 011, or just 11. If we add 110 + 11, we get 121. And that's a palindrome! It took two steps to get there, but there it is! Let's call those first examples like 24 and 17 1-step palindromes, since they reached a palindrome in one step. And we can call 19 a 2-step palindrome.

https://mathforlove.com/lesson/number-palindromes/

Pattern Block Triangles

How many triangles can you make with 4 pattern blocks?

3 triangles + 1 hexagon = 4 blocks

What about 5?

10?

Think about the numbers 1-20.

How many different ways can you build a triangle with that number of pattern blocks?

https://mathforlove.com/lesson/pattern-block-triangles/

Forty Faces – Spatial Reasoning

How many triangles does it take to make a blue rhombus? Red trapezoid? Yellow hexagon?

How many triangles would you need to make the face on the right? *(write equation)*

Now you try... How can you make faces with the area of 10 triangles? 20? 30? 40?

Horseshoe Addition & Subtraction Card Game

See website for more details

Group Discussion Stems

Agreeing	Adding to an idea
I agree with that idea because…	I have something to add to that idea… What if we tried to use…
Disagreeing	**Clarifying**
I disagree with that idea because…	So what you're trying to say is… Can you tell me what you mean when you say _____?

Working in Groups

How should we start?

What if we tried…?

I'm wondering…

We know…

If this is ____, then…

How many…?

How much do we…?

If you're confused you may ask/say…

Why are we…?

I'm confused about…

Can you tell me more about…?

Why is ___ a good idea/strategy to use?