3rd Grade Bridges Math

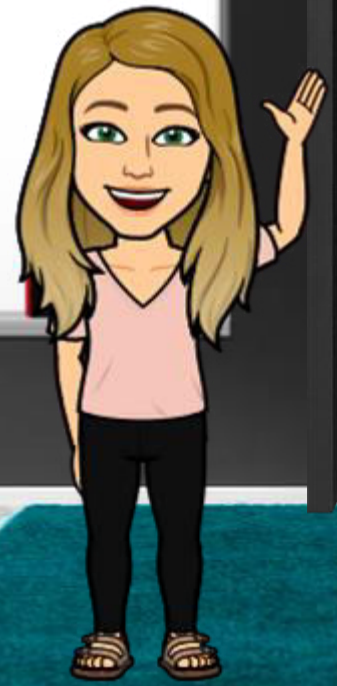
Unit 2

Module 1

Module 2

Module 3

Module 4



Module 1

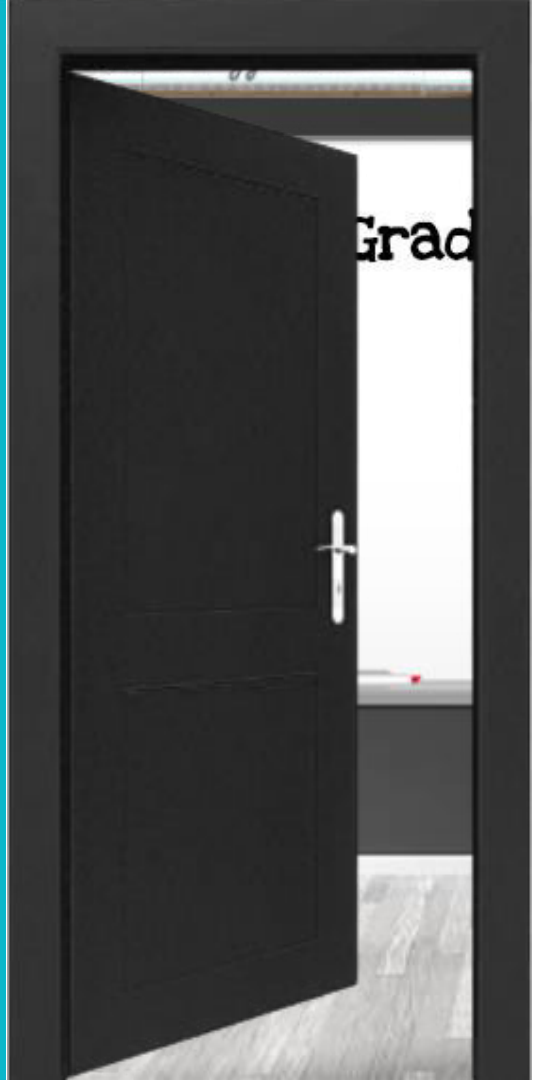
Session 1
Pet Store

Session 2
Pre-Assessement

Session 3
Stamps

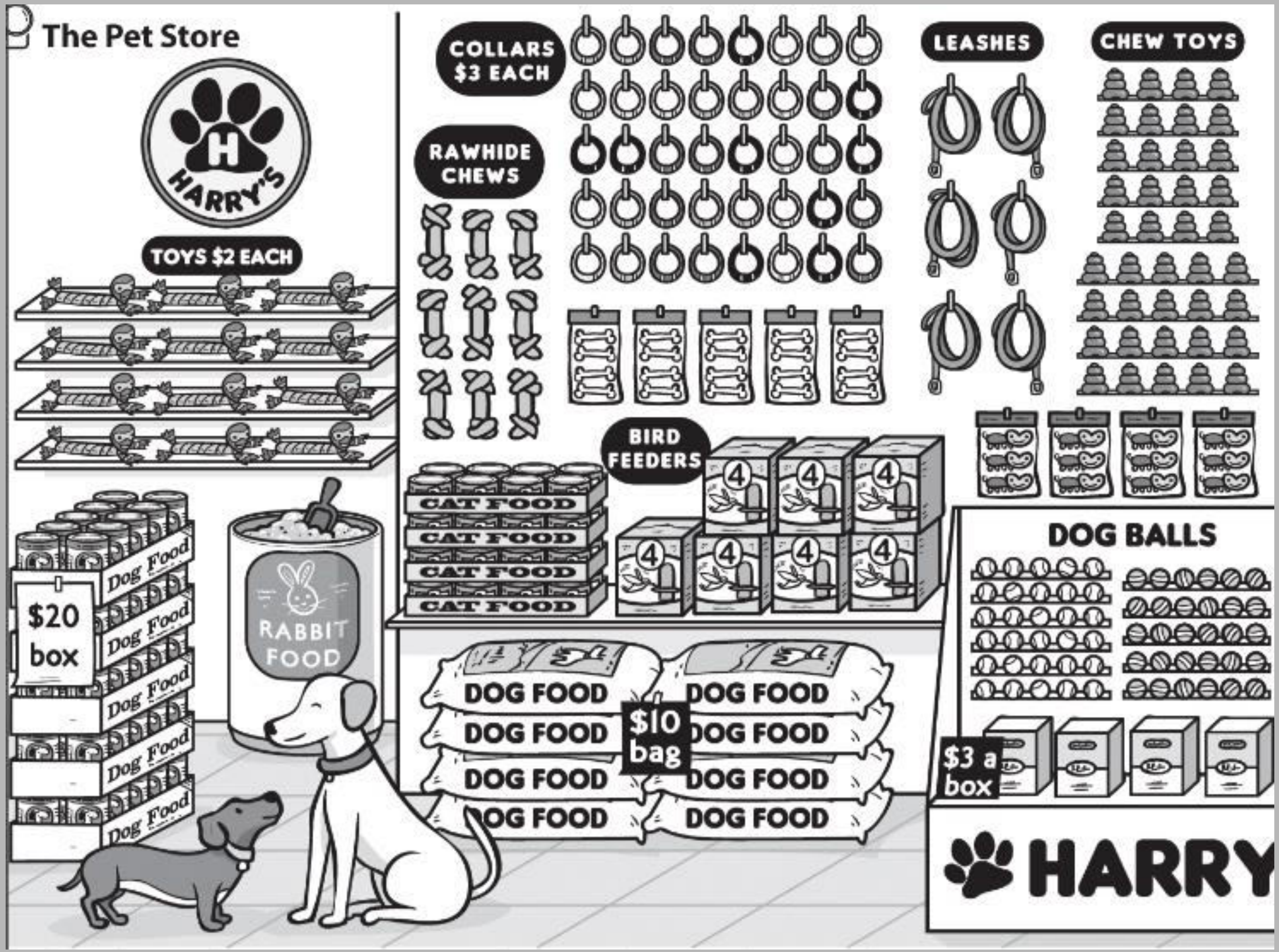
Session 4
Stamps Part 2

Session 5
Seascape Problems



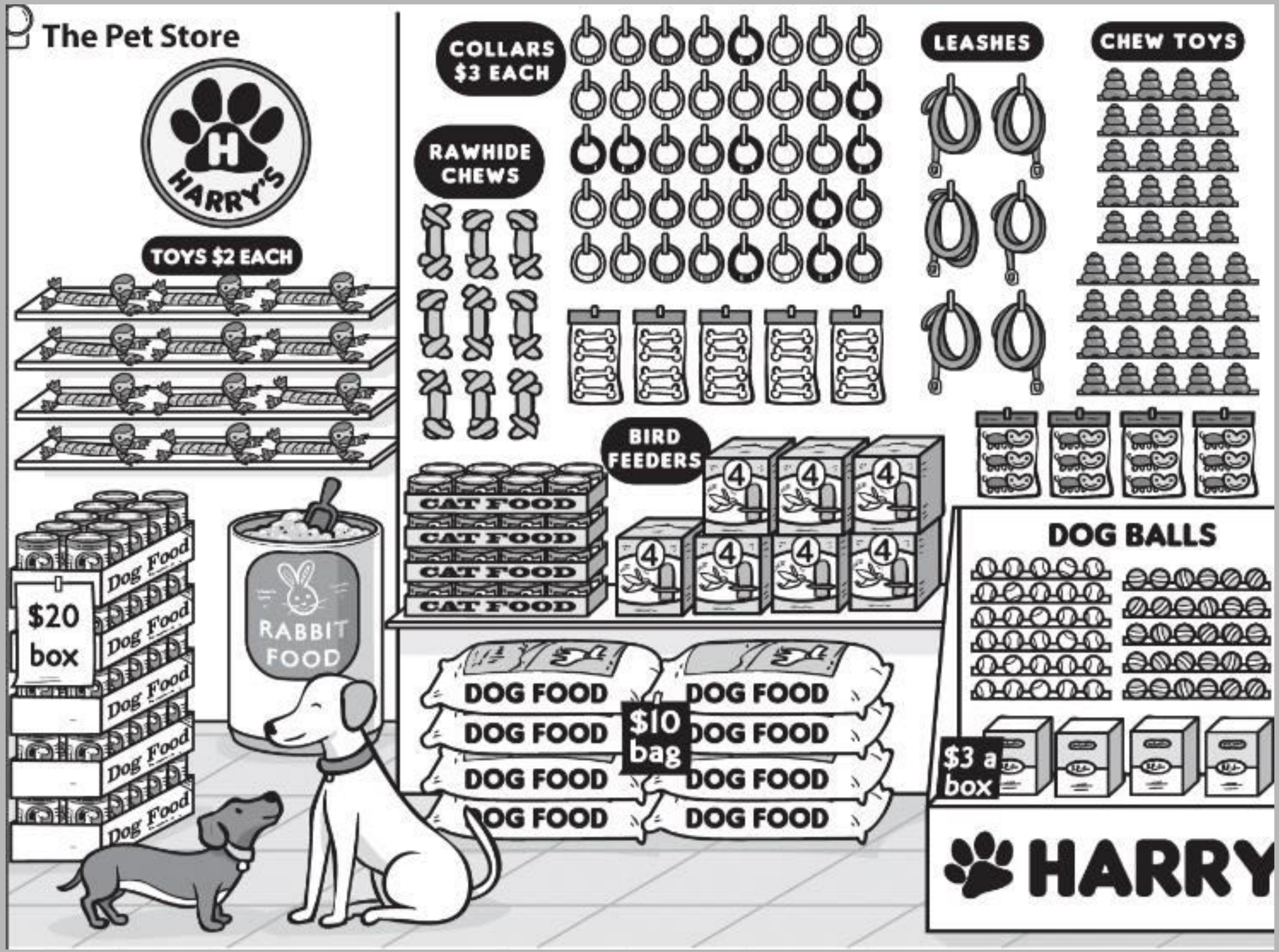
Pet Store
Learning Targets

- Interpret products of whole numbers
- Solve multiplication problems with products to 100 involving situations of equal groups and arrays
- Use and explain additive strategies to demonstrate an understanding of multiplication
- Multiply using the commutative property
- Make sense of problems and persevere in solving them
- Construct viable arguments and critique the reasoning of others


The Pet Store
HARRY'S
TOYS $2 EACH
COLLARS $3 EACH
RAWHIDE CHEWS
LEASHES
CHEW TOYS
BIRD FEEDERS
CAT FOOD
Dog Food
$20 box
RABBIT FOOD
DOG FOOD
$10 bag
DOG BALLS
$3 a box
HARRY

A lot of you are seeing groups of things in this picture. Using the words ***groups of*** is a great mathematical way to describe what you are seeing. Mathematicians record this in a special way.

$$2 \times 4 = 8$$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RABBIT FOOD
DOG FOOD
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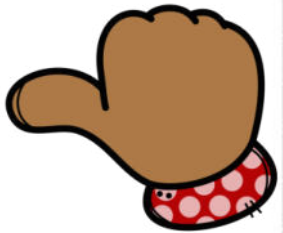
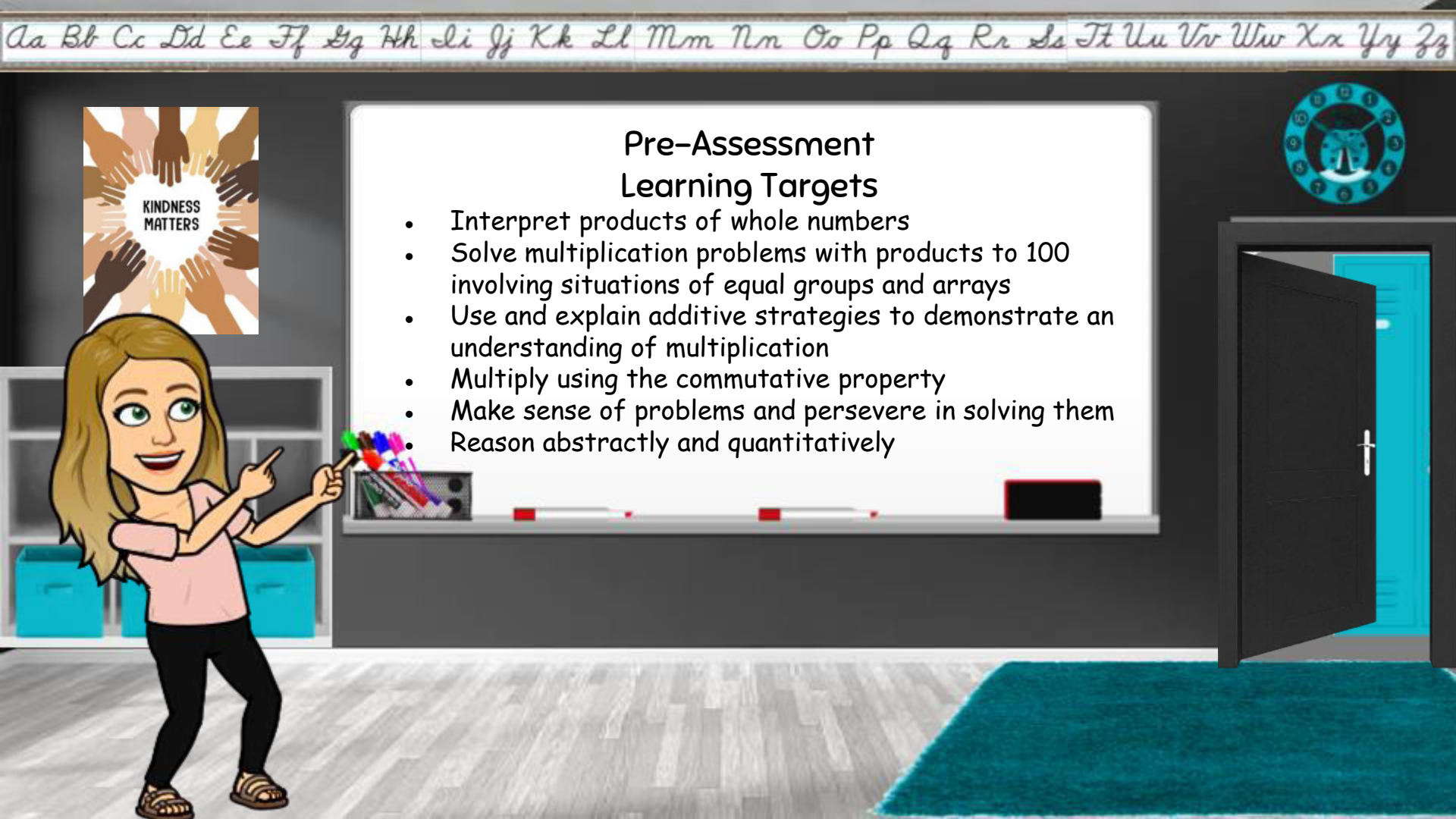
DOG BALLS
$3 a box
HARRY

Thumbs up, thumbs down or sideways?



1. Did you find the total of at least two items?
2. Did you find the total of three or more items?
3. Did you find the total of five or more items?
4. Did you find out how much some of your items cost?

Share what you found, what strategy did you use to count the items?


Pre-Assessment
Learning Targets
Interpret products of whole numbers
Solve multiplication problems with products to 100 involving situations of equal groups and arrays
Use and explain additive strategies to demonstrate an understanding of multiplication
Multiply using the commutative property
Make sense of problems and persevere in solving them
Reason abstractly and quantitatively
KINDNESS MATTERS


10¢ USA
10¢ USA
10¢ USA
10¢ USA
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10¢ USA
10¢ USA
10¢ USA


10¢ USA
10¢ USA
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10¢ USA


10¢ USA
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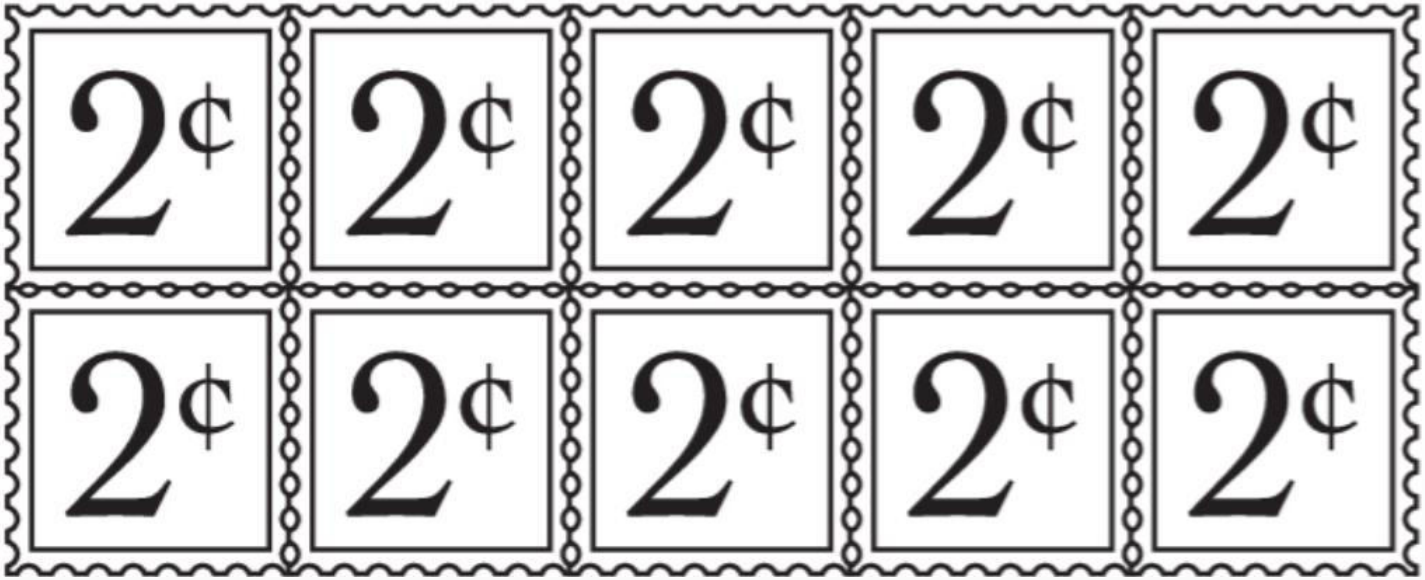
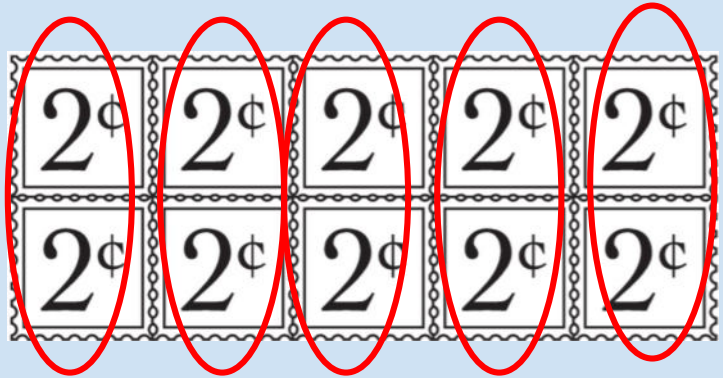
10¢ USA
10¢ USA

How much does this sheet of stamps cost?



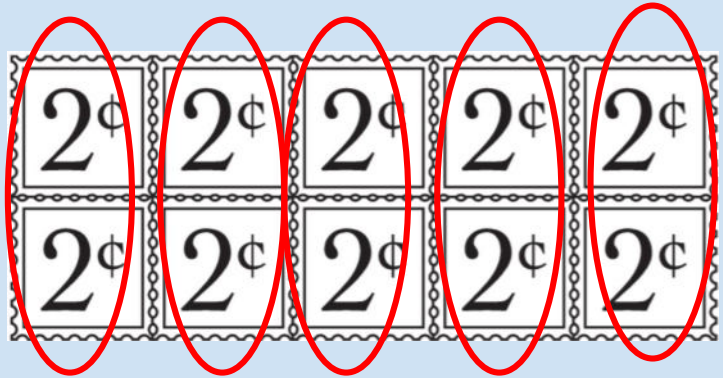
How many equal groups?

2 groups of 5 stamps



5 groups of 2 stamps

Blue strategy



5 groups of 2 stamps

4+4+4+4+4

8+4+4+4

12+4+4

16+4

20

The group of stamps costs 20¢.

Purple Strategy

2 groups of 5 stamps

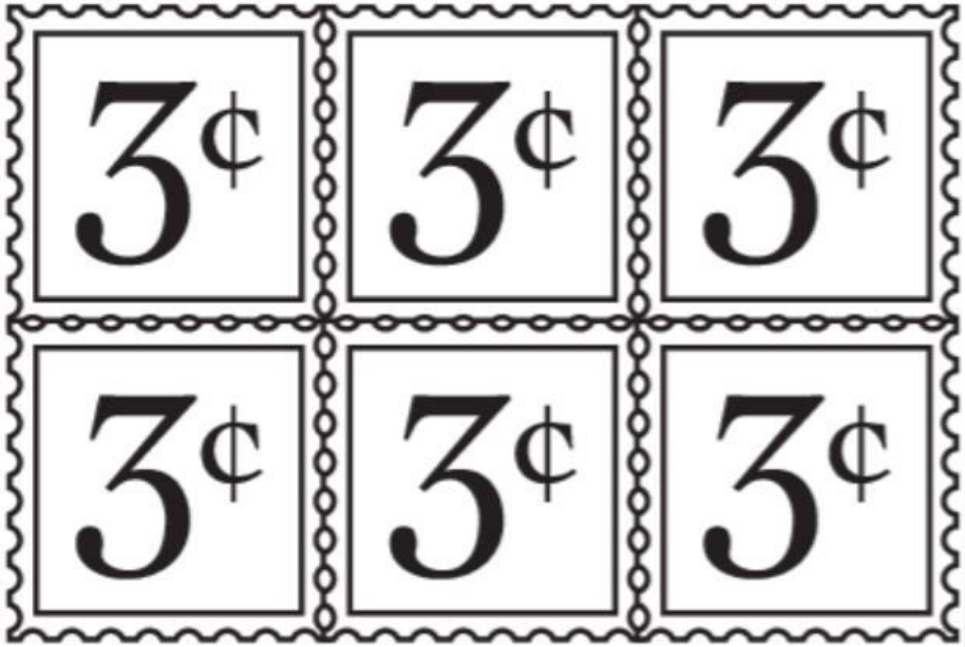
2 4 6 8 10

10

$10¢ + 10¢ = 20¢$

How did Preston use equal groups? How did they use what they know about doubles?

How much does this sheet of stamps cost?



How much does this sheet of stamps cost?

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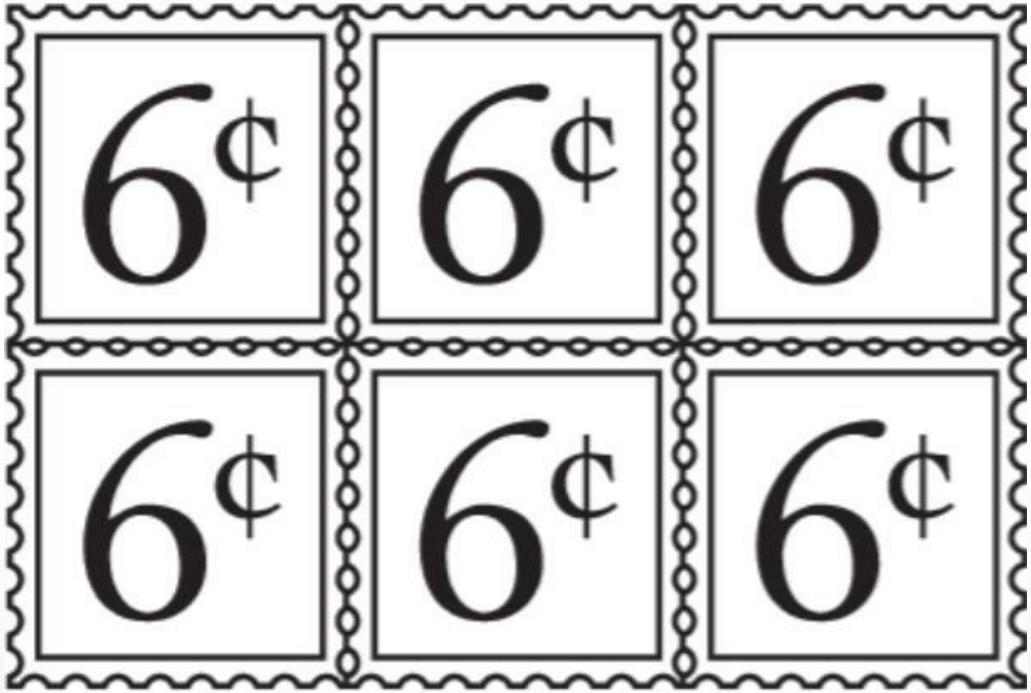

Stamps (Part 1)
Learning Targets

- Interpret products of whole numbers
- Solve multiplication problems with products to 100 involving situations of equal groups and arrays
- Use and explain additive strategies to demonstrate an understanding of multiplication
- Multiply using the commutative property
- Identify patterns among basic multiplication facts
- Attend to precision
- Look for and make use of structure


10¢ USA
10¢ USA
10¢ USA
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10¢ USA
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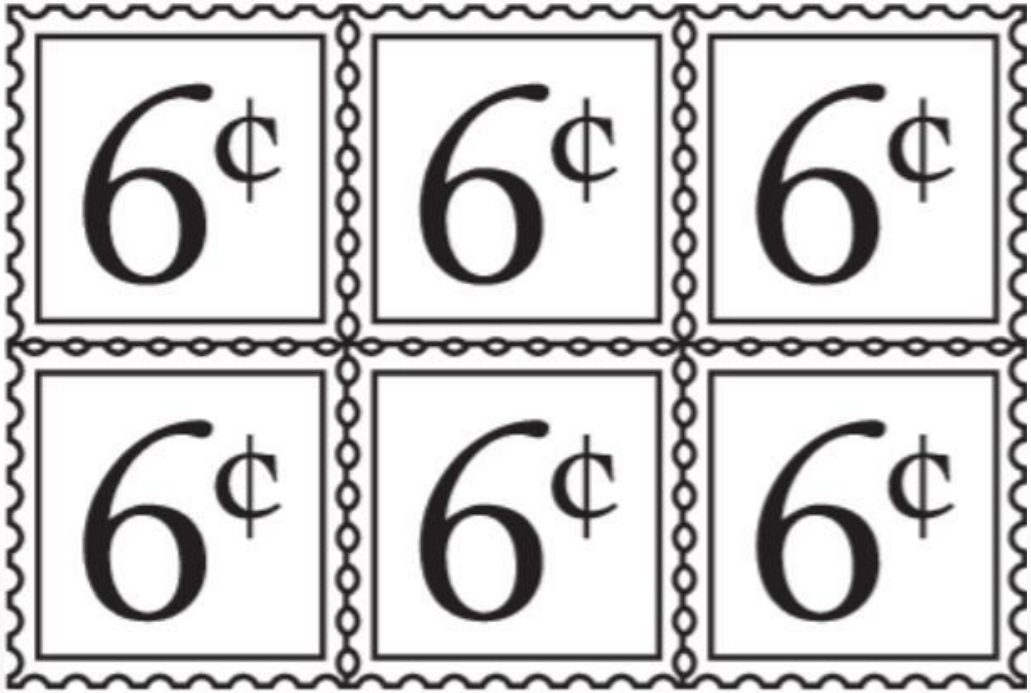
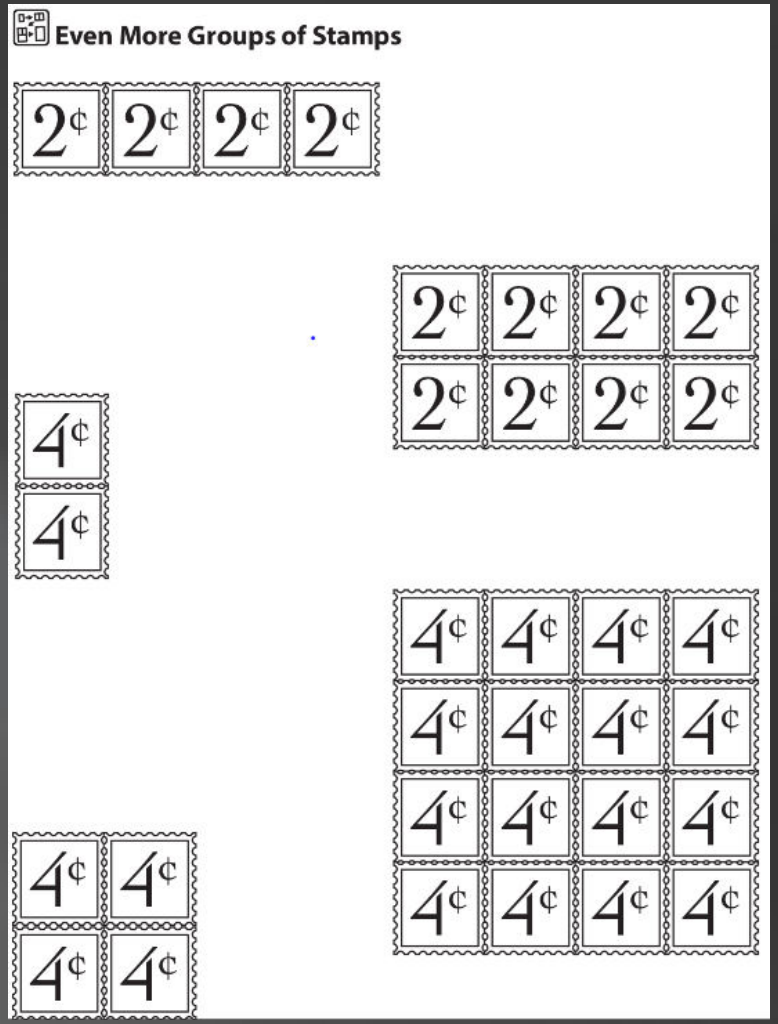
10¢ USA
10¢ USA

How much does this sheet of stamps cost?





Find More Groups of Stamps in your Student Books page 36 Seesaw Assignment.

You can use strategies that you saw in the stamps problem string or the problem you just solved.

As mathematicians, you are charged with a mission of coming up with and using efficient strategies to solve problems. In other words, you need to find ways of solving a problem that are quick but are also clear to you and others.

Show your work clearly on the sheet.

We will share our work in a math forum tomorrow.

Stamps (Part 2)
Learning Targets

- Interpret products of whole numbers
- Solve multiplication problems with products to 100 involving situations of equal groups and arrays
- Use and explain additive strategies to demonstrate an understanding of multiplication
- Multiply using the commutative property
- Make sense of problems and persevere in solving them
- Construct viable arguments and critique the reasoning of others

- A **math forum** is an active learning time when class members will share their thinking and the class will discuss the problems and solution strategies.

- A few people will share today, and others will get to share in future forums.

- The **role of the audience** is just as important as the presenters.

- The audience is responsible for listening respectfully, asking questions, and learning from others.

Math Forum Guidelines:

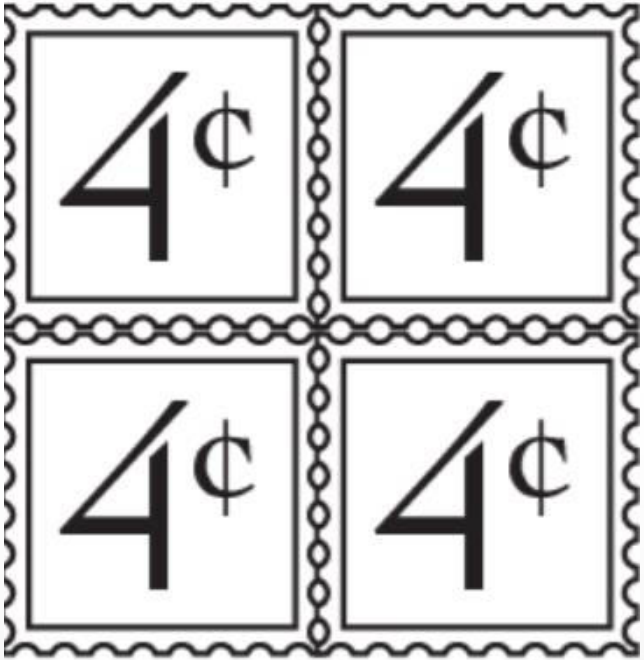
- Introduce your work and clearly explain what you did and why you did that.
- Students may ask you questions during your presentation.
- Audience members must be attentive and respectful.
- Students not presenting are expected to participate by asking questions, adding on to what a presenter shares, and discussing what is being presented.
- This is an opportunity for learning. You will be expected to use something you learned in the forum later on.

Share how you solved:

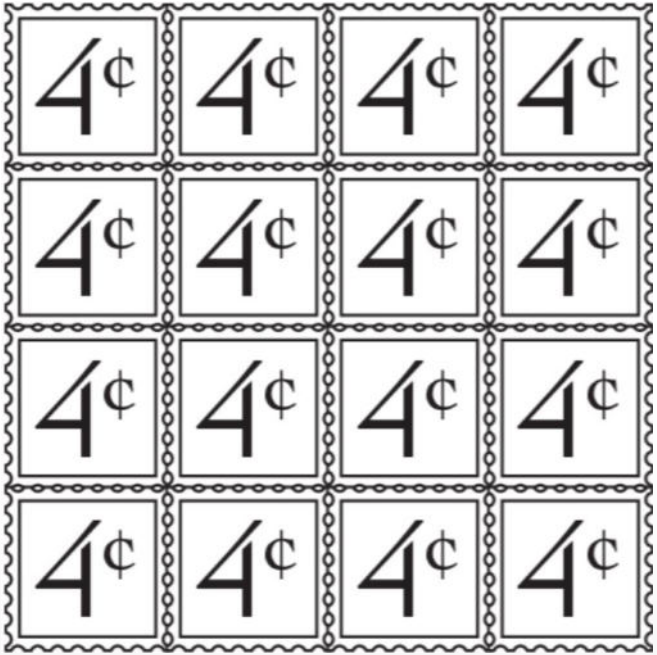
Share how you solved:

Share how you solved:

Share how you solved:

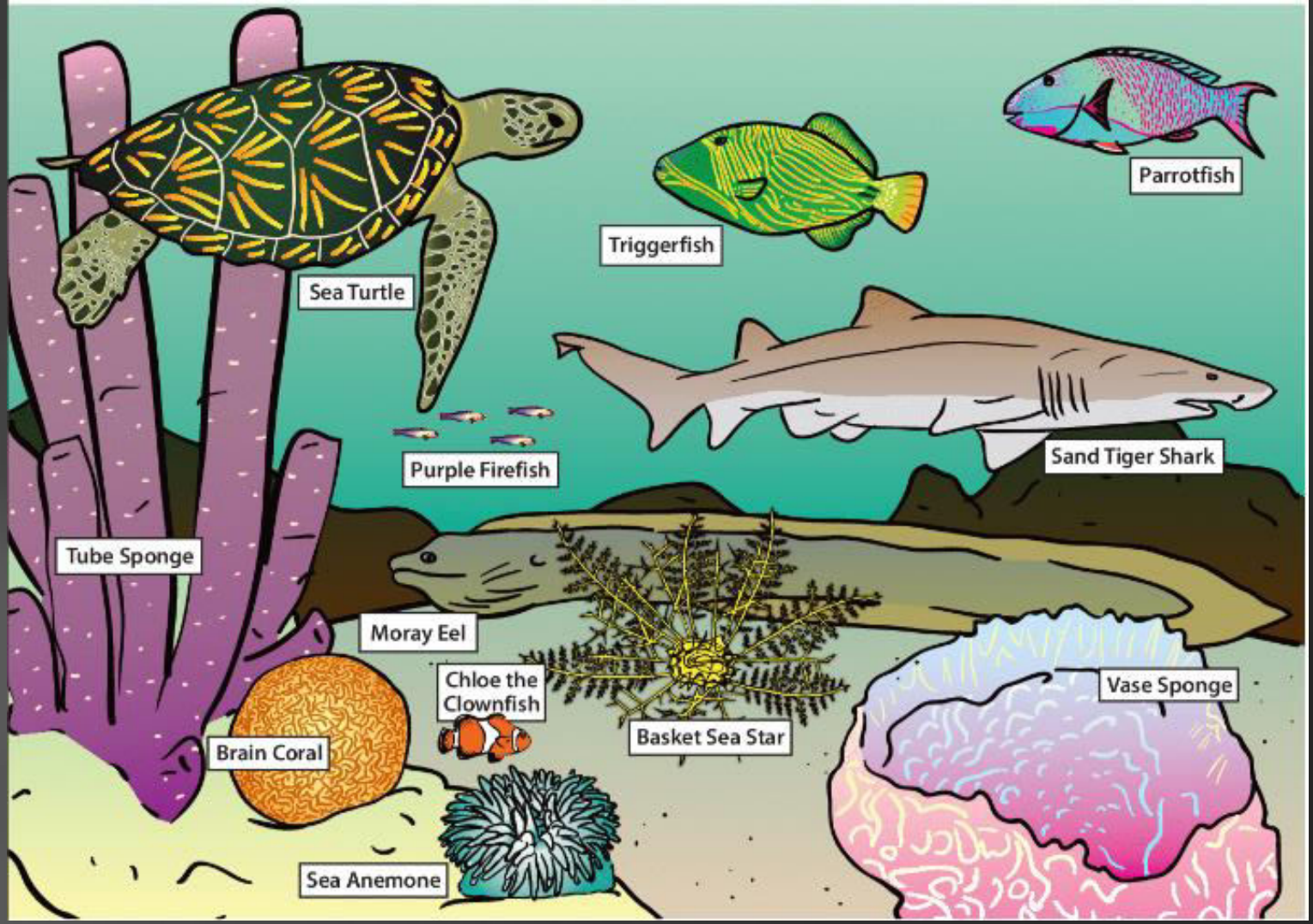


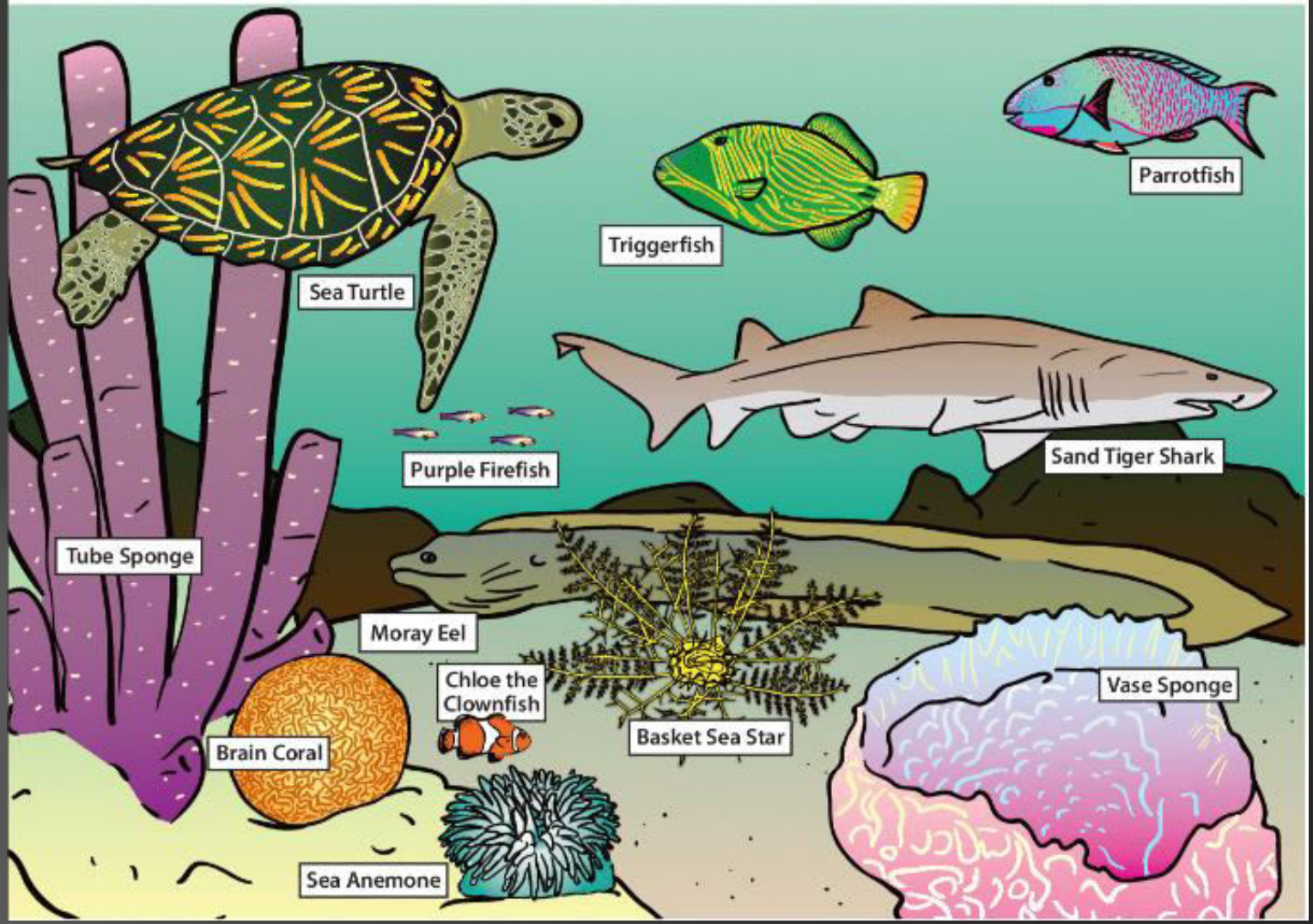
Share how you solved:



Seascape Problems
Learning Targets

- Interpret products of whole numbers
- Solve multiplication problems with products to 100 involving situations of equal groups and arrays
- Use and explain additive strategies to demonstrate an understanding of multiplication
- Identify patterns among basic multiplication facts
- Make sense of problems and persevere in solving them
- Use appropriate tools strategically
- Look for and make use of structure


Parrotfish
Triggerfish
Sea Turtle
Sand Tiger Shark
Purple Firefish
Tube Sponge
Moray Eel
Chloe the Clownfish
Vase Sponge
Basket Sea Star
Brain Coral
Sea Anemone


Parrotfish
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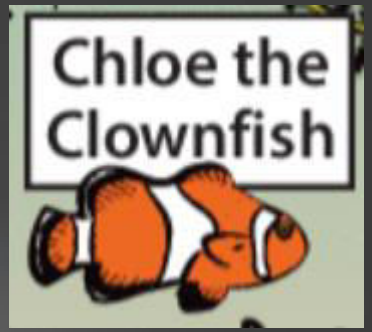
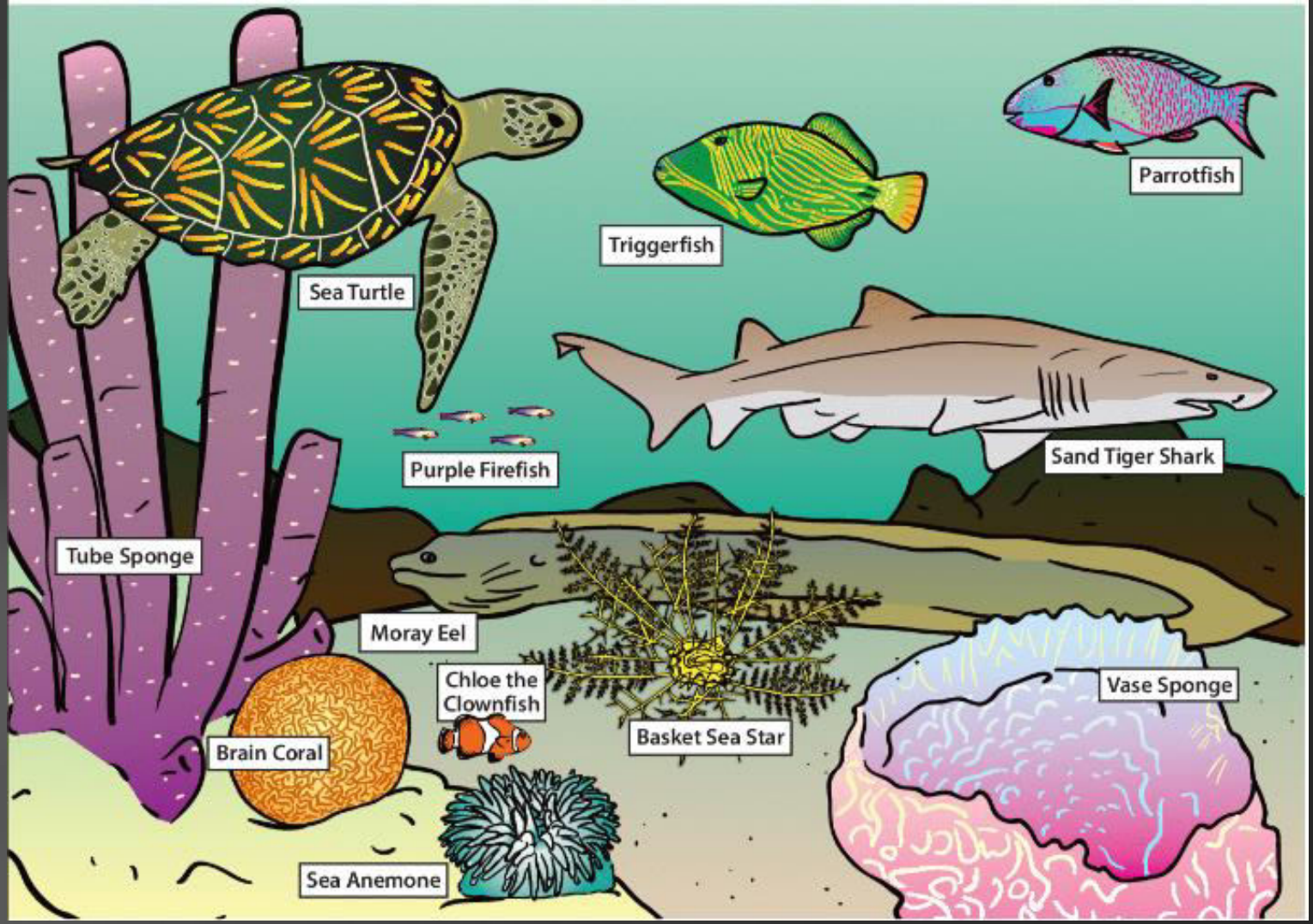


This is a clownfish. Clownfish live in coral reefs in the Indian and Pacific Oceans. They are not very big fish. Our seascape picture is only a picture, but in real life, clownfish are usually between 4 and 7 inches long. This clownfish is about 4 inches long and her name is Chloe. Can you see something around you that might be 4 inches long?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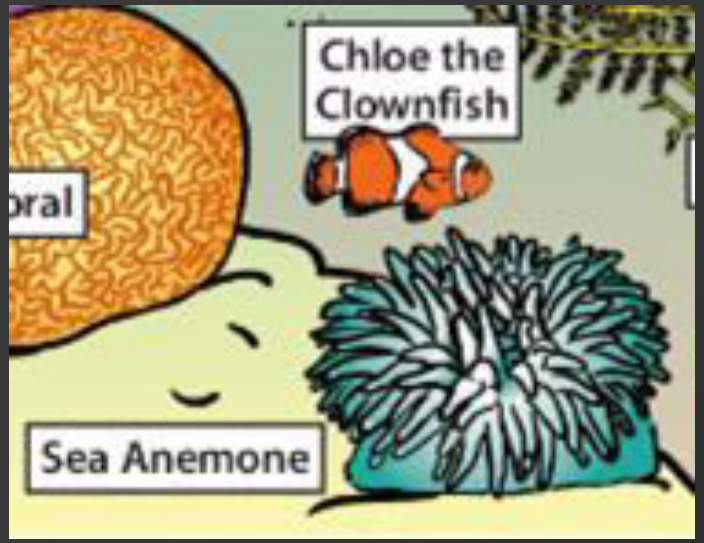
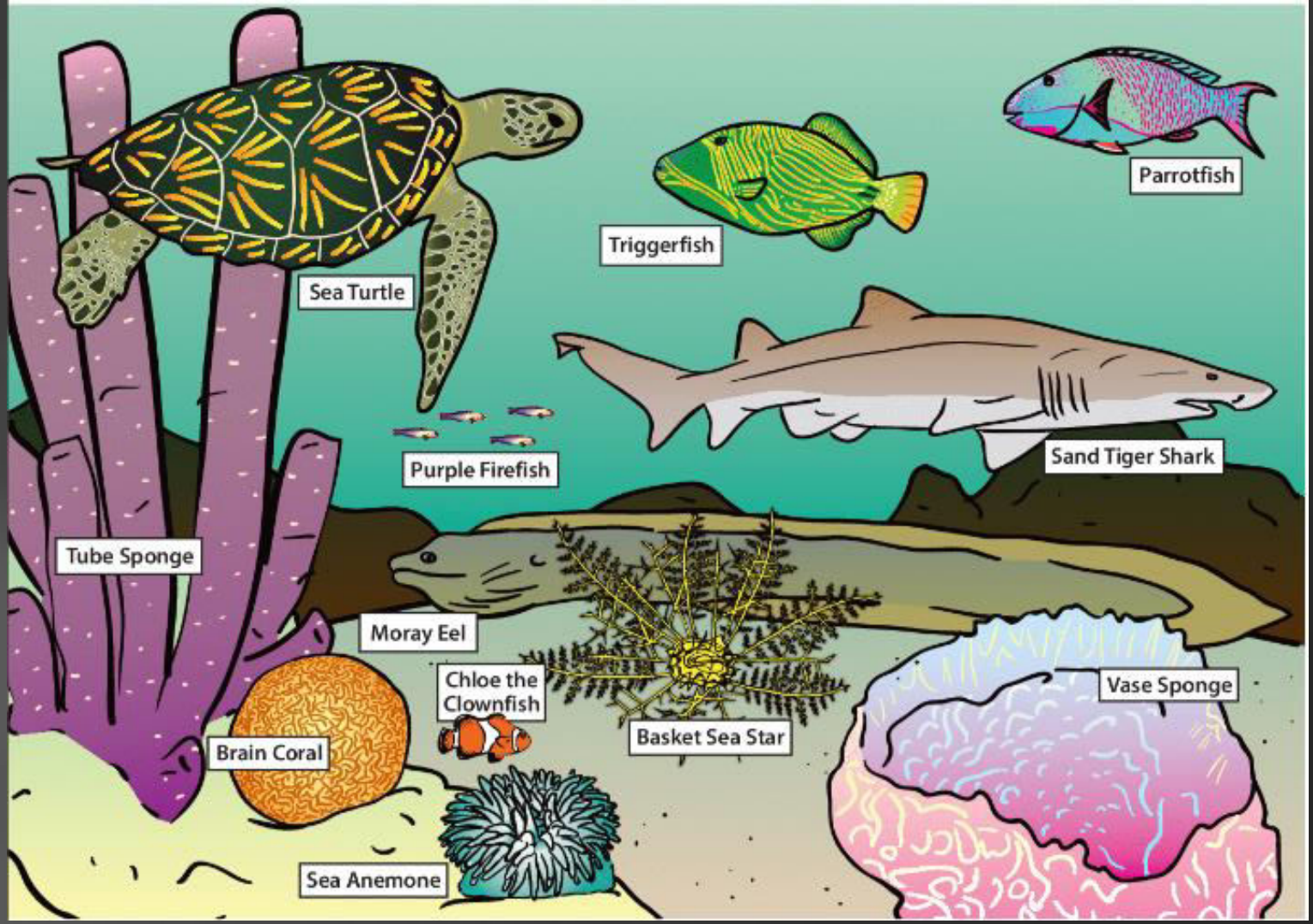


How could you figure out how wide the sea anemone would be in real life?

If Chloe is 4 inches long in real life, about how wide would the sea anemone be? How do you know?

How many times can Chloe's length fit across the width of the sea anemone?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Triggerfish
Sea Turtle
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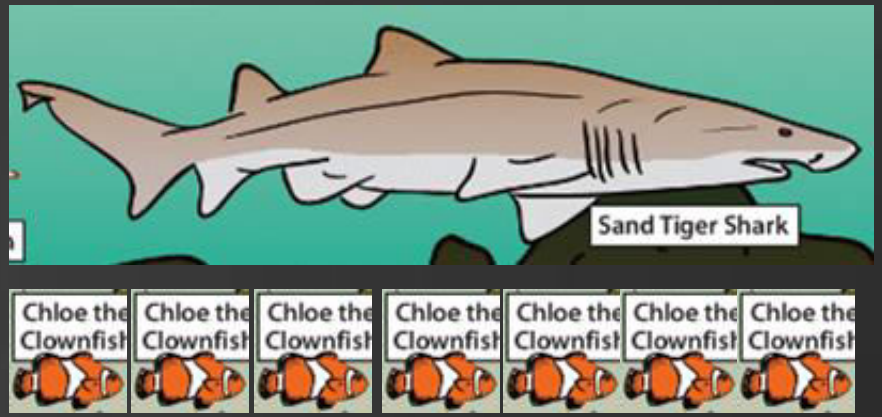
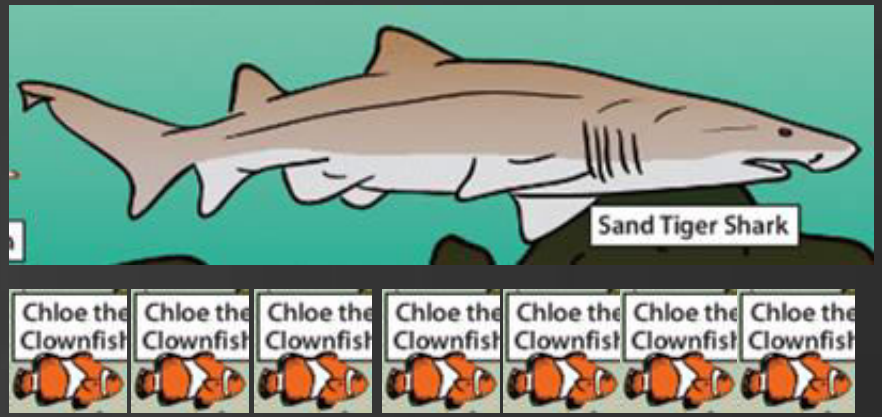
Tube Sponge
Moray Eel
Chloe the Clownfish
Vase Sponge
Basket Sea Star
Brain Coral
Sea Anemone

How much bigger is the Sand Tiger Shark than Chloe the Clown Fish?



The Sand Tiger Shark is _____ times longer than Chloe the Clown Fish.

How much bigger is the Sand Tiger Shark than Chloe the Clown Fish?



The Sand Tiger Shark is _____ times longer than Chloe the Clown Fish.

Loops and Groups 2A Workplace

Game Board

Work Place 2A Loops & Groups

For each turn, record your loops and groups. Write a multiplication equation for each turn. Then use the space provided to find the sum of the 5 products.

1st Turn

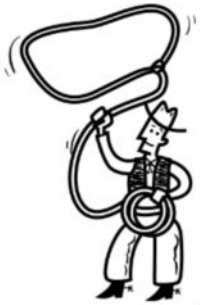
2nd Turn

3rd Turn

4th Turn

5th Turn

Find the Sum



Module 2

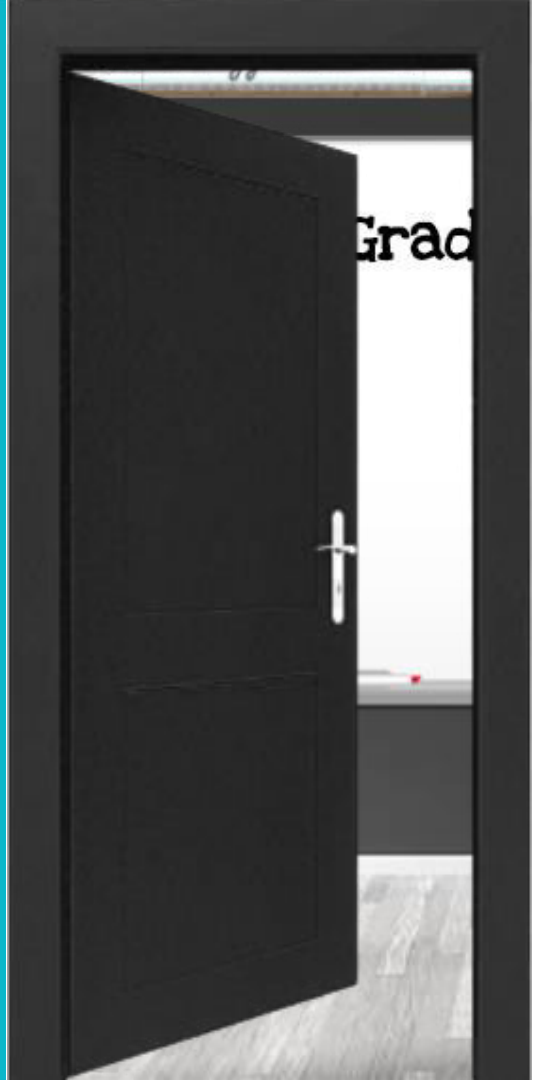
Session 1
Count Arounds

Session 2
Multiples Strips

Session 3
Watertown's Window Washer

Session 4
Wally Keeps Washing

Session 5
Watertown Post Office

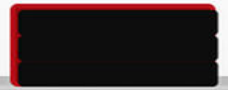


Count Arounds
Learning Targets

- Interpret products of whole numbers
- Solve multiplication problems with products to 100 involving situations of equal groups and arrays
- Identify patterns among basic multiplication facts
- Use and explain additive strategies to demonstrate an understanding of multiplication
- Look for and make use of structure
- Look for and express regularity in repeated reasoning

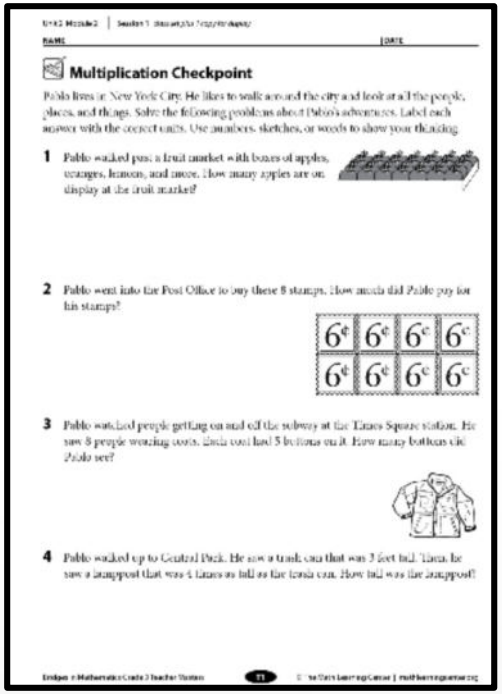
Today we will do a different type of count around. Today, you will call out multiples of a particular number (skip-counting) and whisper all the other numbers as the whole class counts together.





Multiples of 3	3,
Multiples of 6	6,
Multiples of 9	9,

Multiplication Checkpoint



NAME _____ DATE _____

Multiplication Checkpoint

Pablo lives in New York City. He likes to walk around the city and look at all the people, places, and things. Solve the following problems about Pablo's adventures. Label each answer with the correct units. Use numbers, sketches, or words to show your thinking.

1 Pablo walked past a fruit market with boxes of apples, oranges, lemons, and more. How many apples are on display at the fruit market?

2 Pablo went into the Post Office to buy these 8 stamps. How much did Pablo pay for his stamps?

6¢	6¢	6¢	6¢
6¢	6¢	6¢	6¢

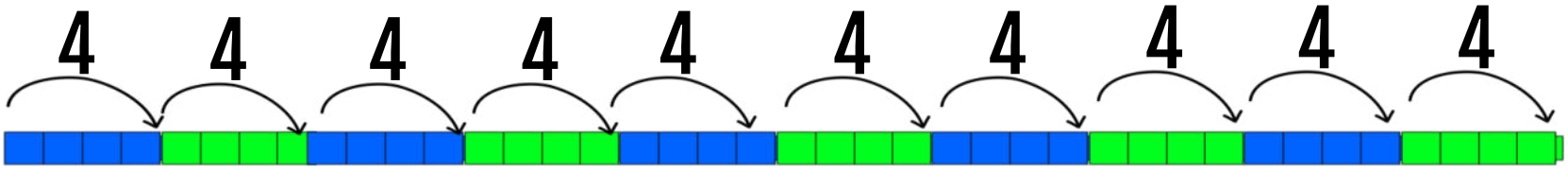
3 Pablo watched people getting on and off the subway at the Times Square station. He saw 8 people wearing coats. Each coat had 5 buttons on it. How many buttons did Pablo see?

4 Pablo walked up to Central Park. He saw a trash can that was 3 feet tall. Then he saw a lamppost that was 4 times as tall as the trash can. How tall was the lamppost?

Cube Trains and Multiples Strips
Learning Targets

- Identify patterns among basic multiplication facts
- Use and explain additive strategies to demonstrate an understanding of multiplication
- Model with mathematics
- Look for and make use of structure

Multiples of 2	2,
Multiples of 4	4,
Multiples of 8	8,


4
4
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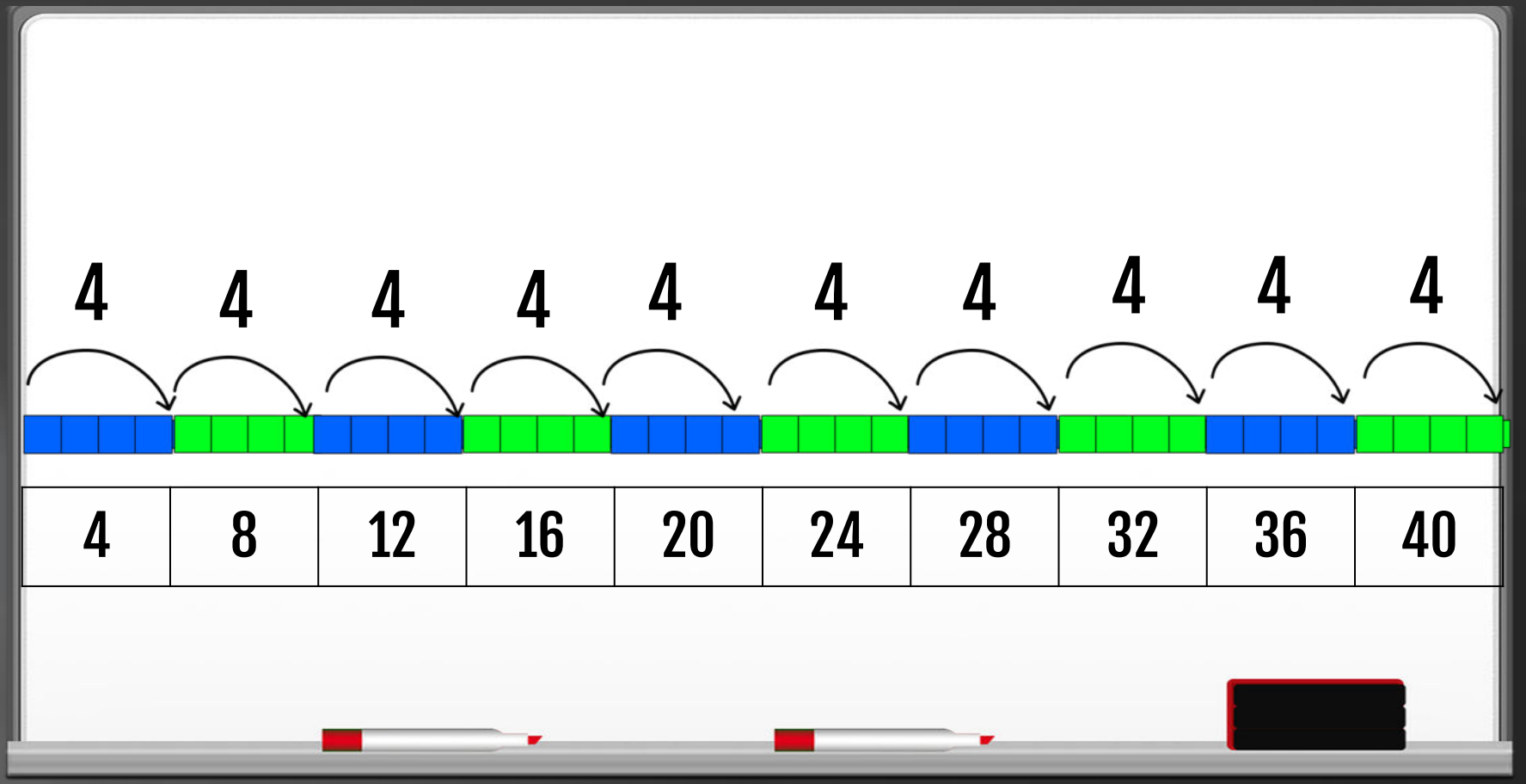
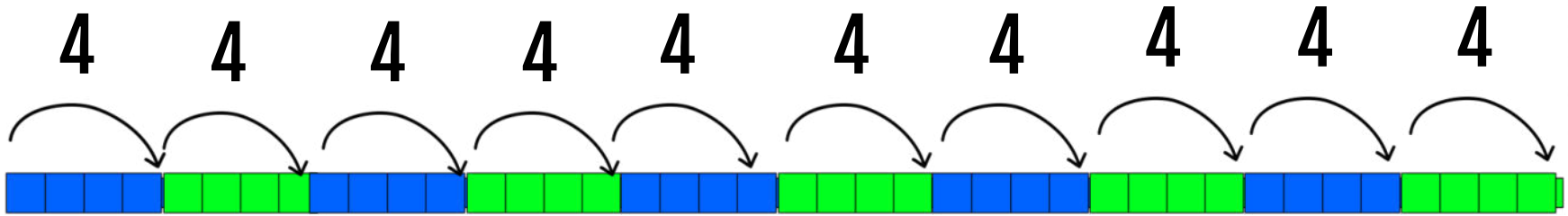
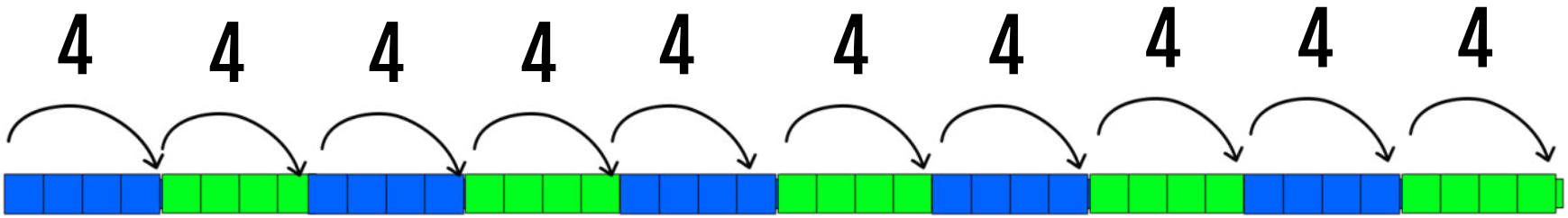
4


4 4 4 4 4 4 4 4 4 4
4 8 12 16 20 24 28 32 36 40



4	8	12	16	20	24	28	32	36	40

How many 4s are in 16? How do you know?
How many 4s are in 28? How do you know?
How many 4s are in 36? How do you know?



4	8	12	16	20	24	28	32	36	40
1	2	3	4	5	6	7	8	9	10

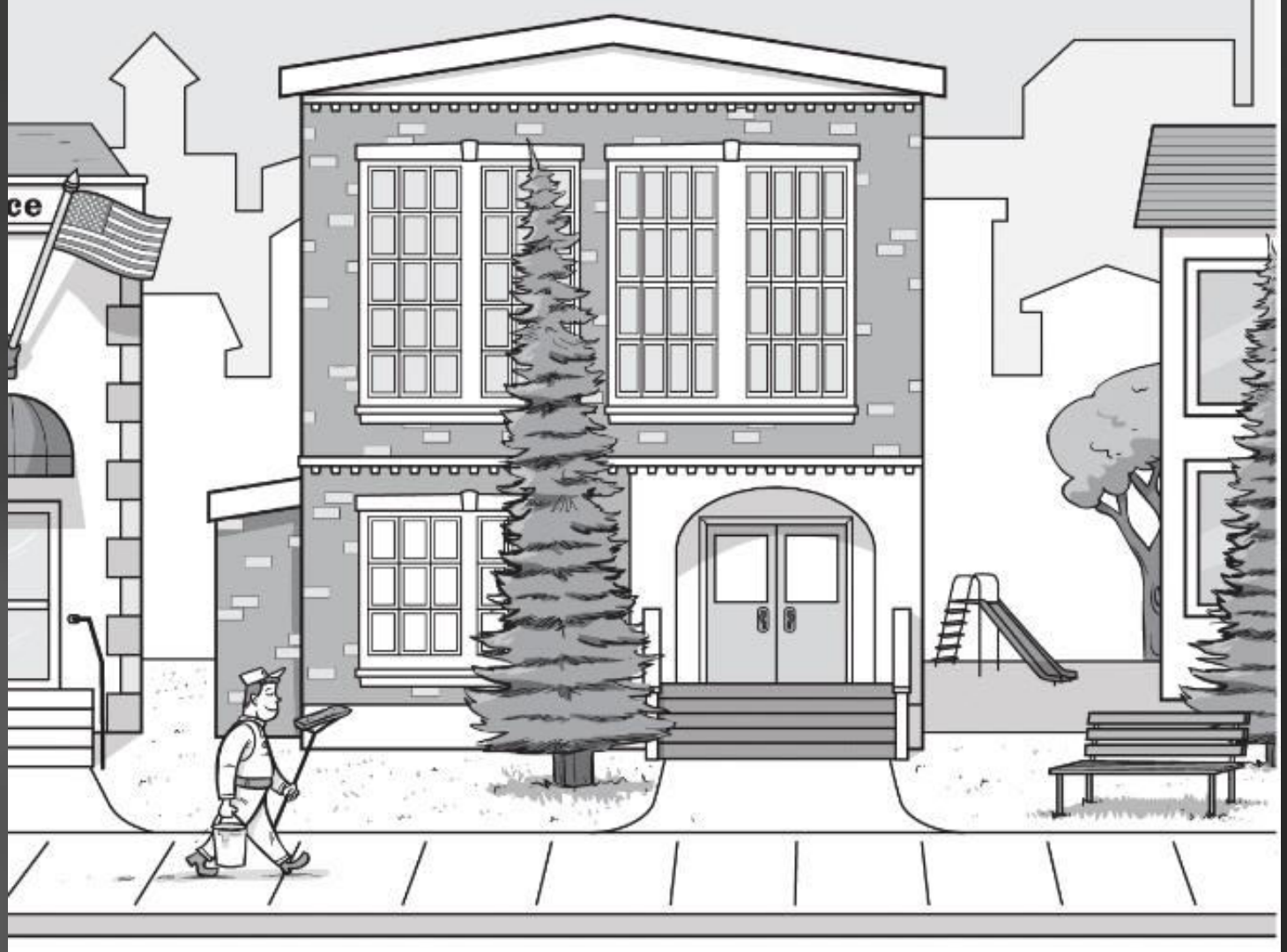
Watertown's Window Washer
Learning Targets

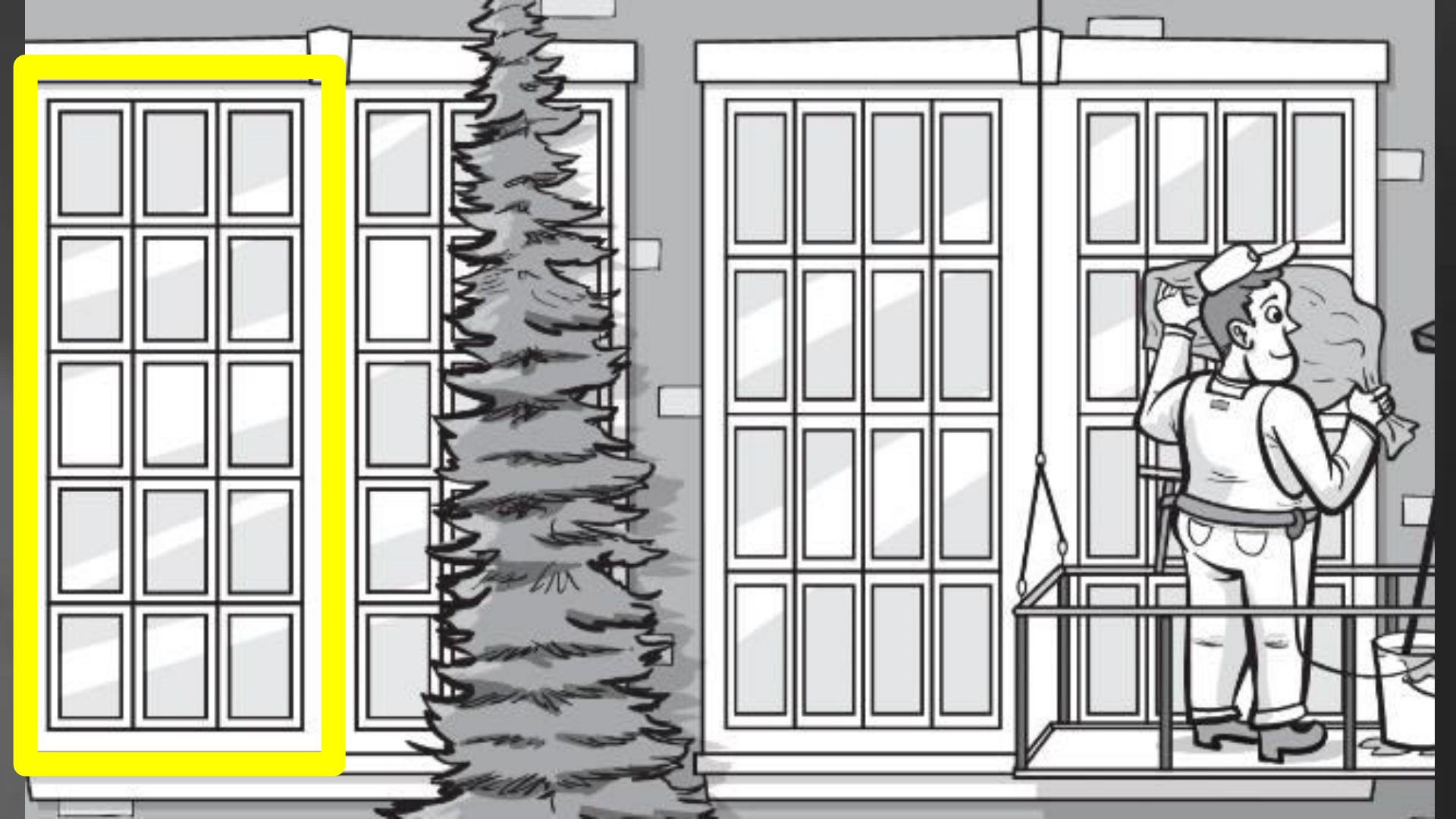
- Interpret products of whole numbers
- Solve multiplication problems with products to 100 involving situations of equal groups and arrays
- Fluently multiply with products to 100 using strategies
- Use and explain additive strategies to demonstrate an understanding of multiplication
- Make sense of problems and persevere in solving them
- Model with mathematics

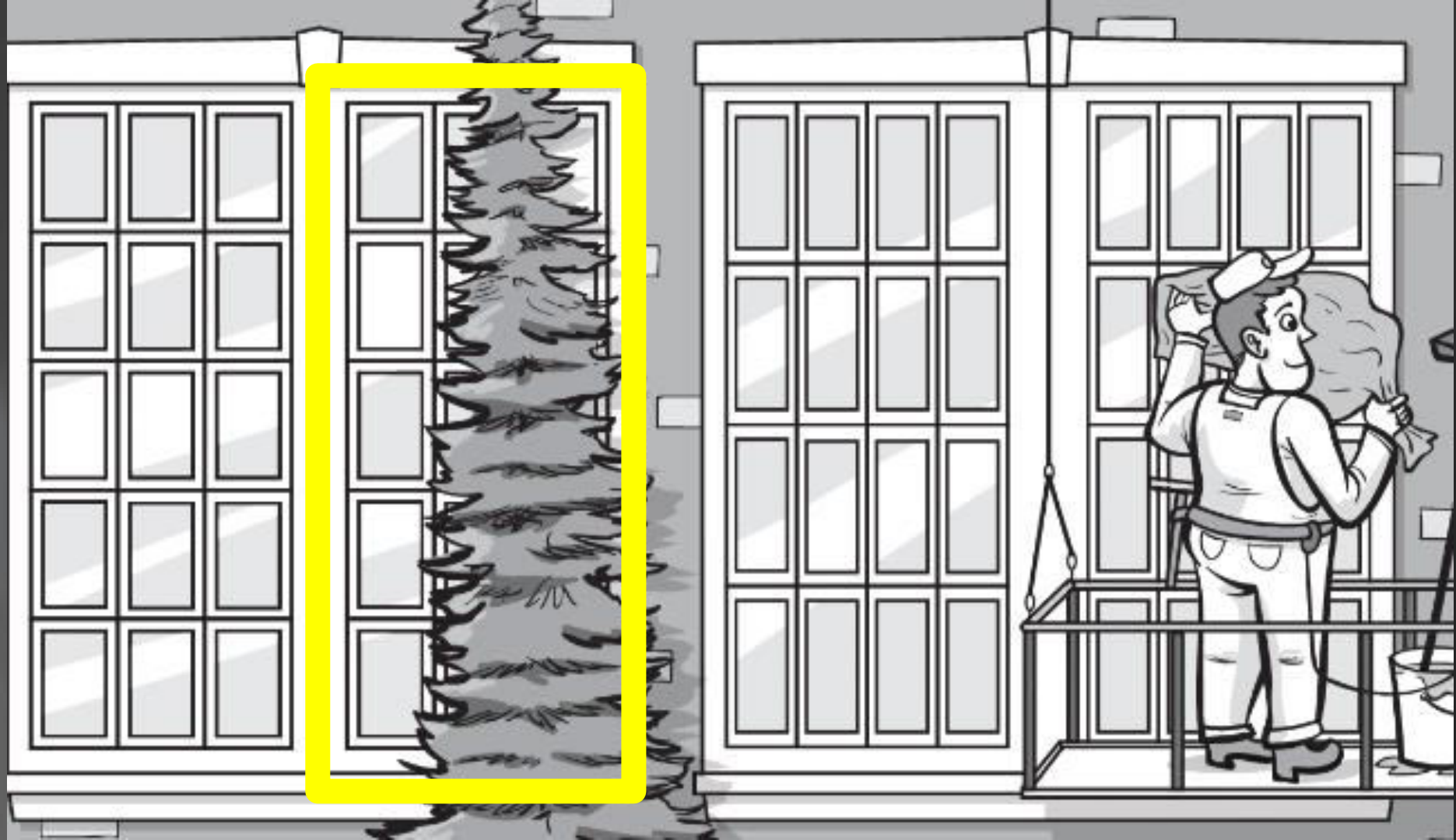
Open to a blank page in your notebook.

Date:

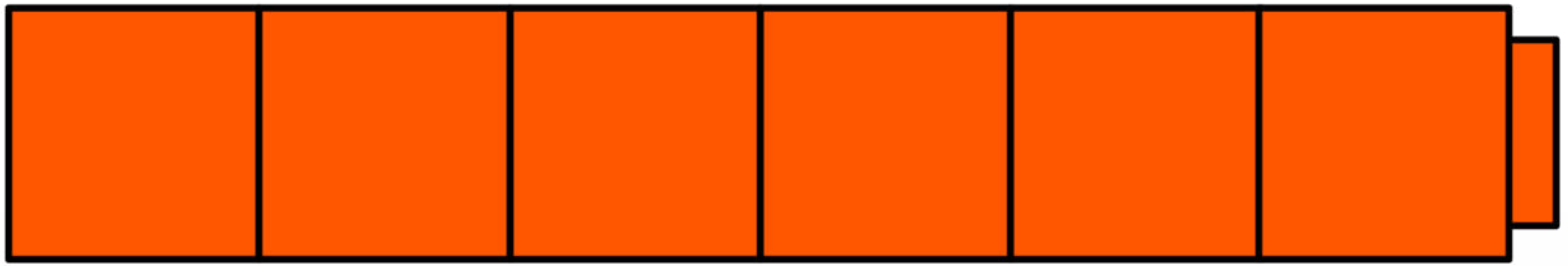
Number Line Puzzles



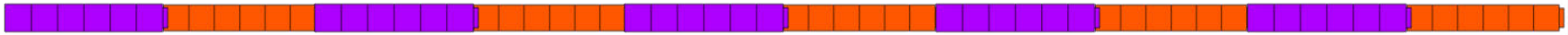


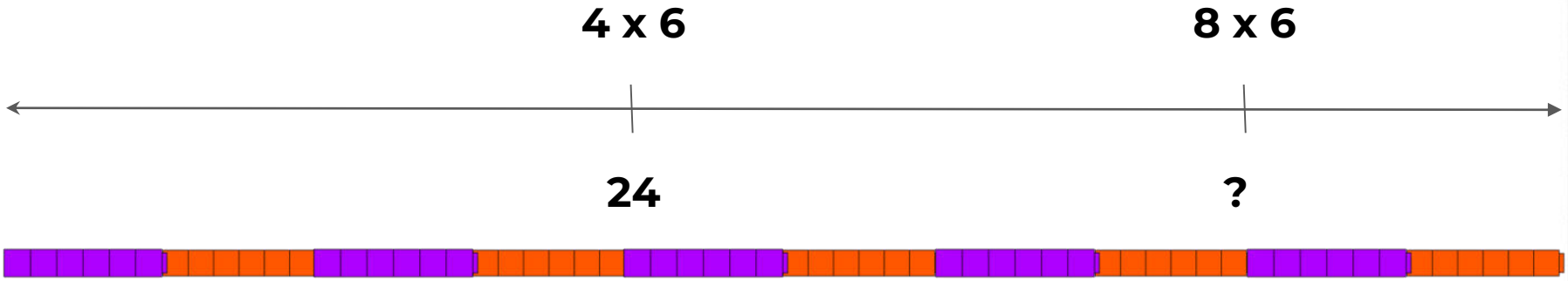


Number Line Puzzle

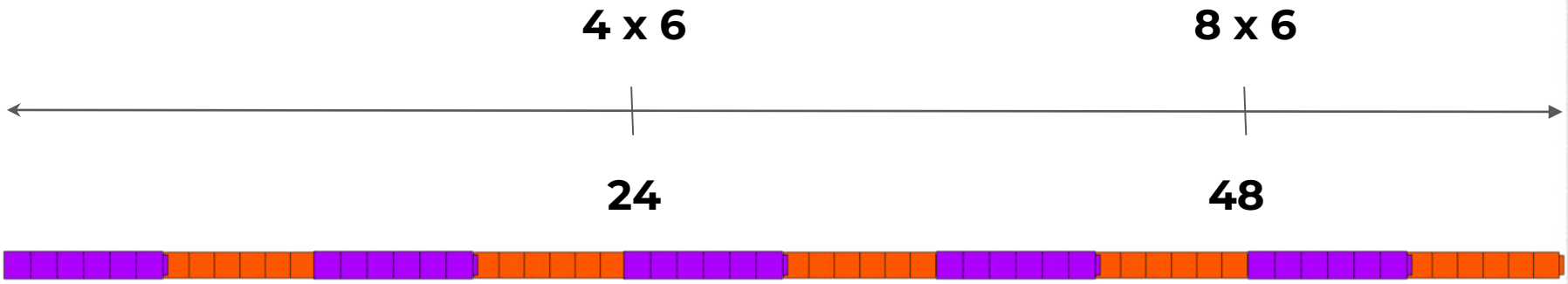


Number Line Puzzle





Can you figure out what 8 x 6 is without using the cube trains?

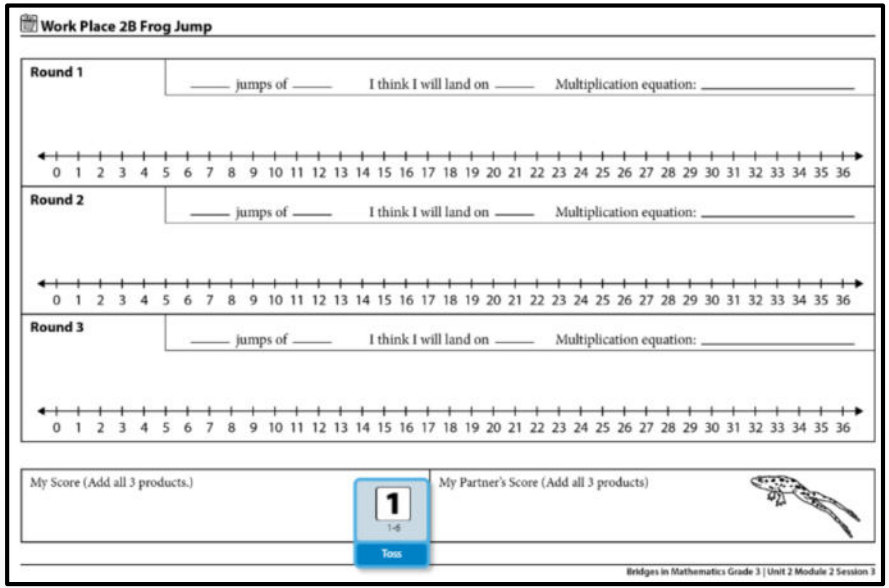


Doubling Strategy

8 x 6 is doubled from 4 x 6
Therefore,
You can double 24 to 48

Frog Jump Multiplication 2B Workplace

Game Board



Work Place 2B Frog Jump

Round 1 ____ jumps of ____ I think I will land on ____ Multiplication equation: _____

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

Round 2 ____ jumps of ____ I think I will land on ____ Multiplication equation: _____

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

Round 3 ____ jumps of ____ I think I will land on ____ Multiplication equation: _____

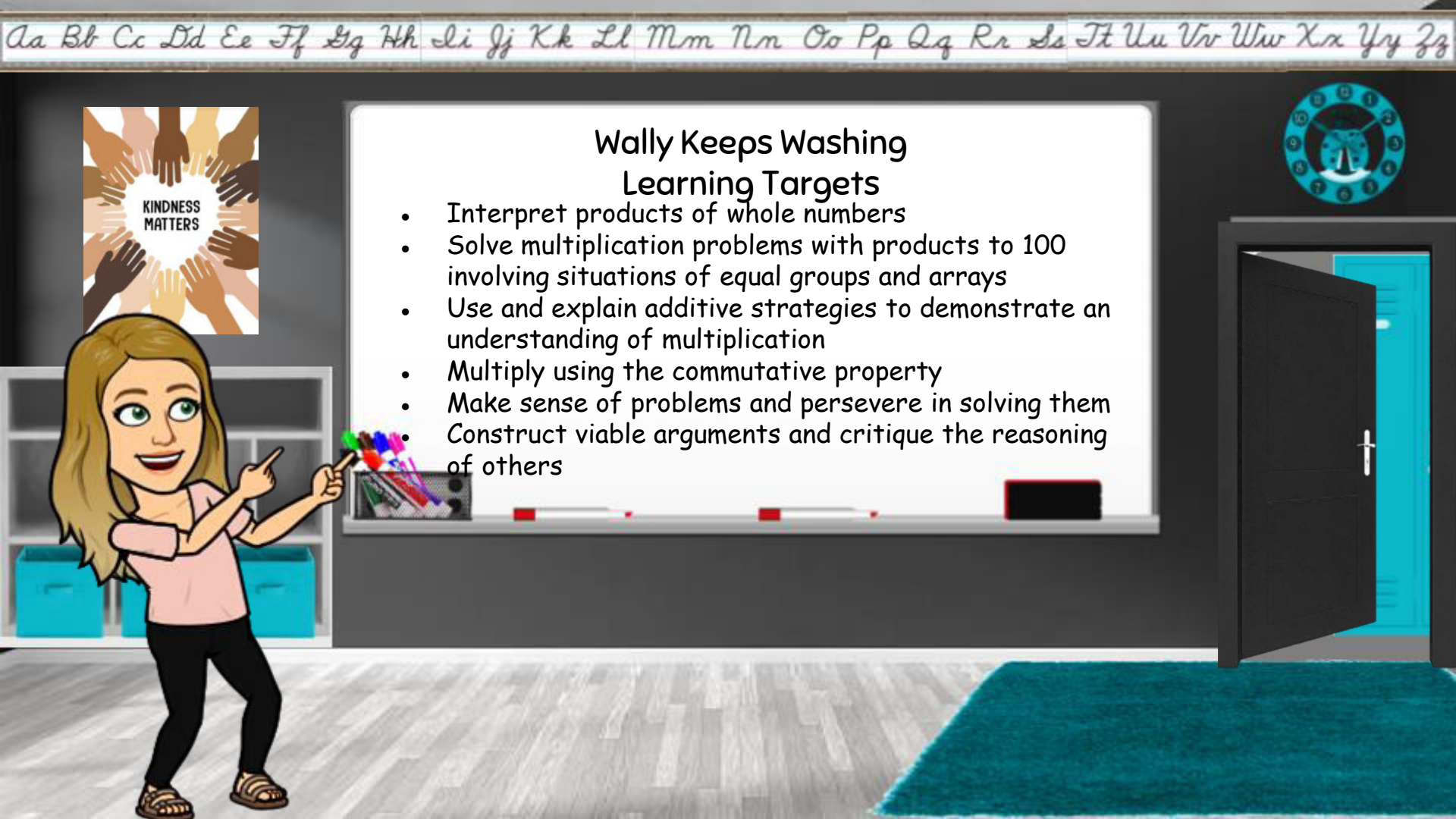
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

My Score (Add all 3 products.)

1
1–6
Toss

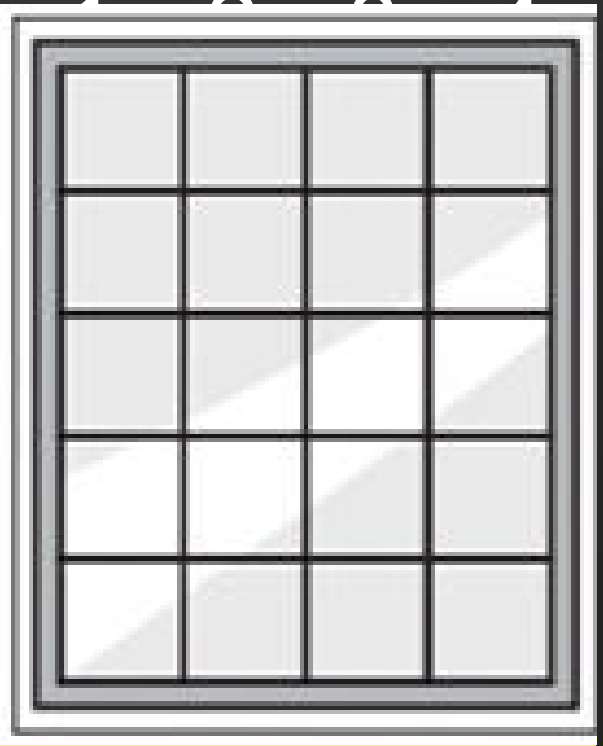
My Partner's Score (Add all 3 products)

Bridges in Mathematics Grade 3 | Unit 2 Module 2 Session 3


Wally Keeps Washing
Learning Targets
• Interpret products of whole numbers
• Solve multiplication problems with products to 100 involving situations of equal groups and arrays
• Use and explain additive strategies to demonstrate an understanding of multiplication
• Multiply using the commutative property
• Make sense of problems and persevere in solving them
• Construct viable arguments and critique the reasoning of others
KINDNESS MATTERS

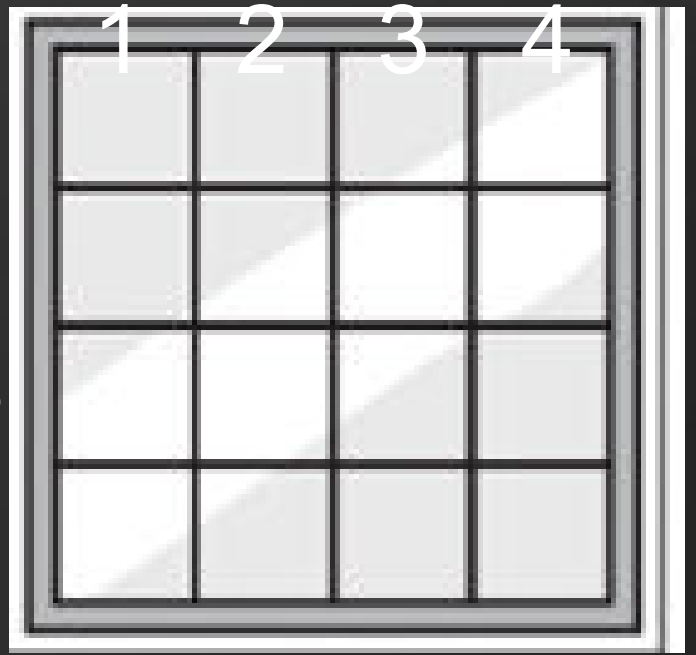

1924
Watertown Post Office

1
2
3
4
5

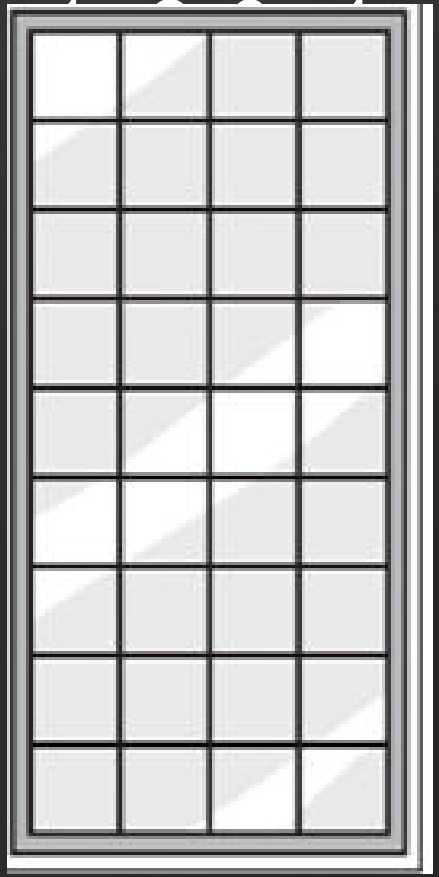


5 X 4 =


1924
Watertown Post Office


1
2
3
4
1
2
3
4

1
2
3
4
5
6
7
8
9



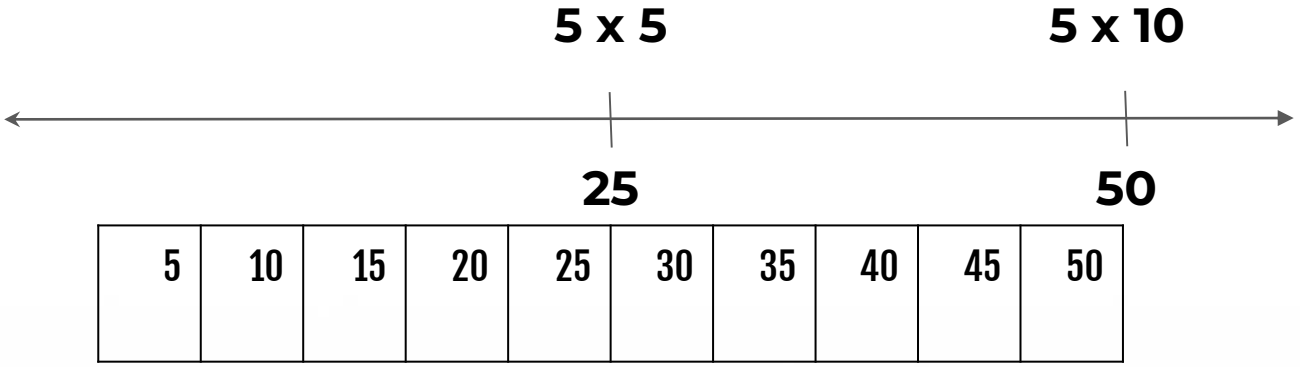
Wally Keeps Washing

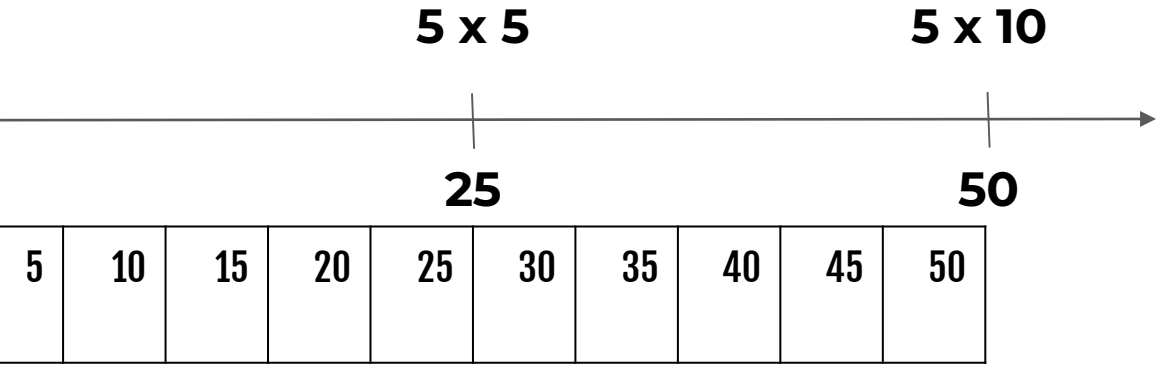
LUND COPY

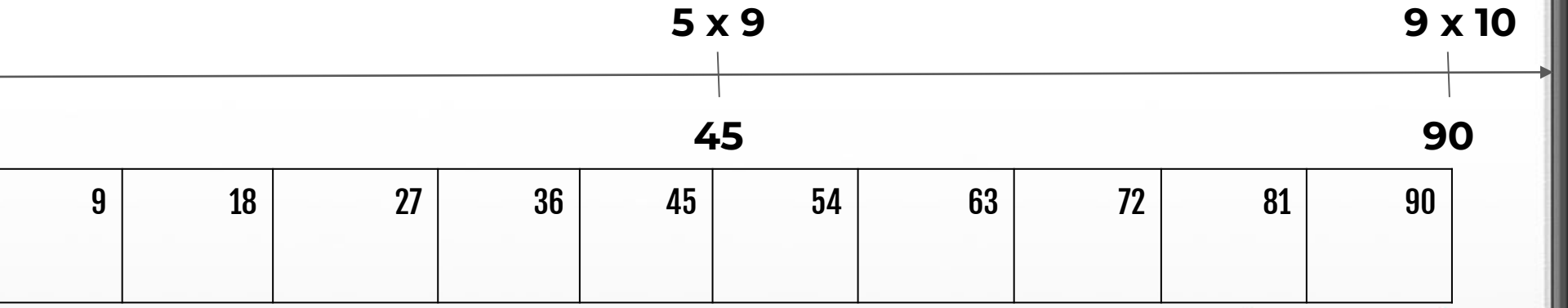
KLEIBER COPY

WENTWORTH COPY

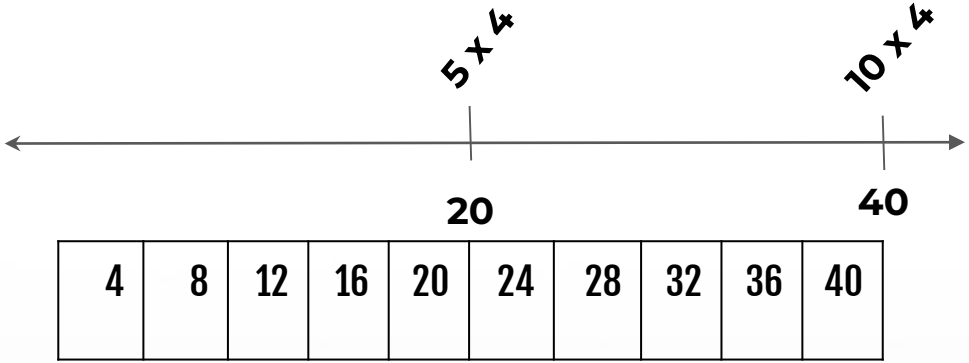
Number Line Puzzles




5 x 5
5 x 10
25
50
5
10
15
20
25
30
35
40
45
50


5 x 9
9 x 10
45
90
9
18
27
36
45
54
63
72
81
90

Number Line Puzzles

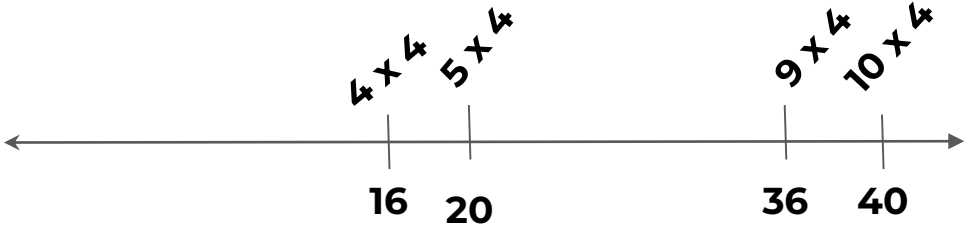


How does 10 x 4 relate to 5 x 4?

How do you know?

How can that help you figure 5 x 4 fast?

Number Line Puzzles



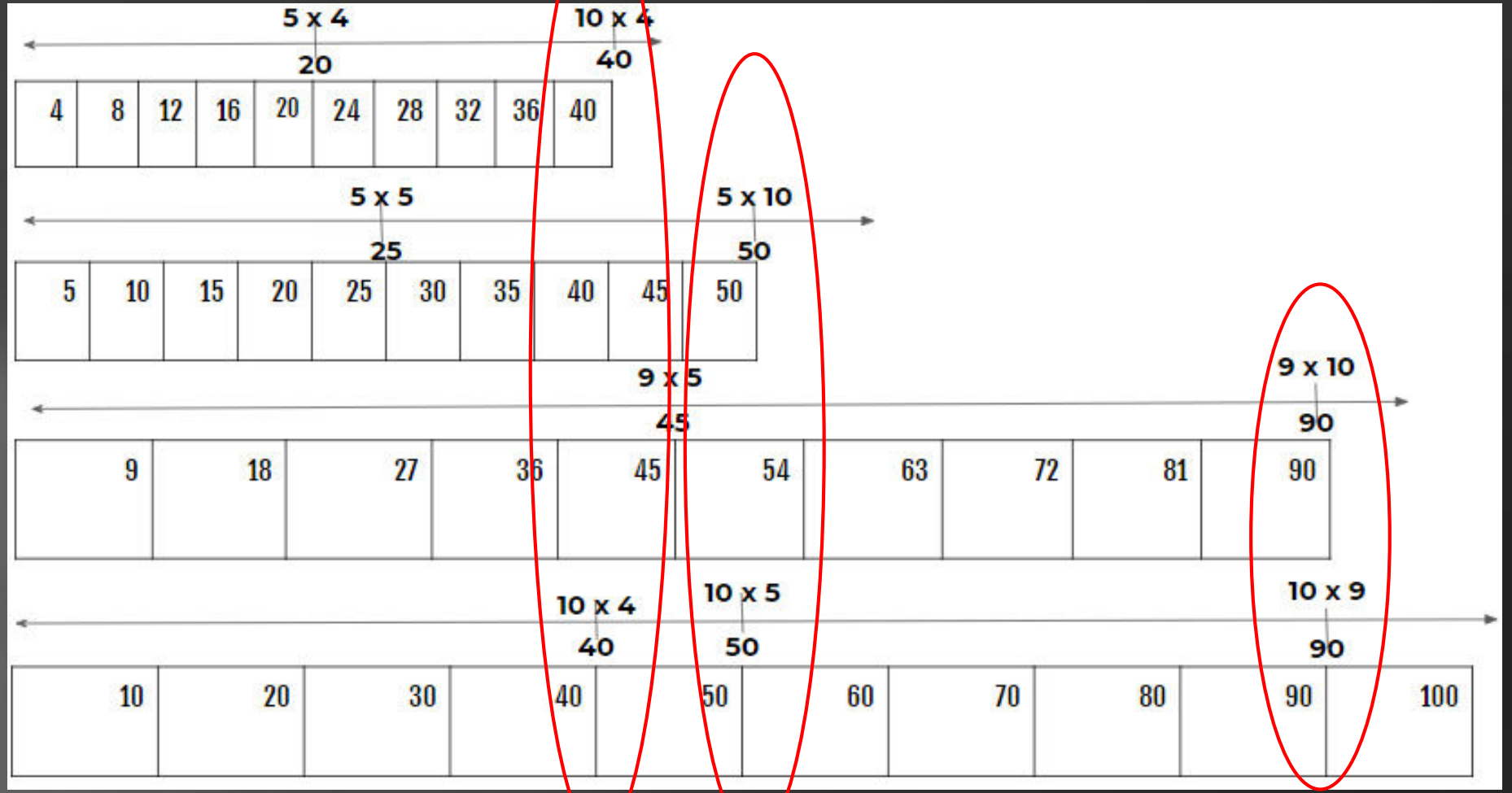
4	8	12	16	20	24	28	32	36	40

Do any of these numbers sound familiar?

Did Wally have some 4 x 4 and 5 x 4 and 10 x 4 windows?

How were those windows related?

Can you see those relationships on the number line and strip?


5 x 4
10 x 4
20
40
4 8 12 16 20 24 28 32 36 40
5 x 5
5 x 10
25
50
5 10 15 20 25 30 35 40 45 50
9 x 5
9 x 10
45
90
9 18 27 36 45 54 63 72 81 90
10 x 4
10 x 5
10 x 9
40
50
90
10 20 30 40 50 60 70 80 90 100

Watertown Post Office
Learning Targets

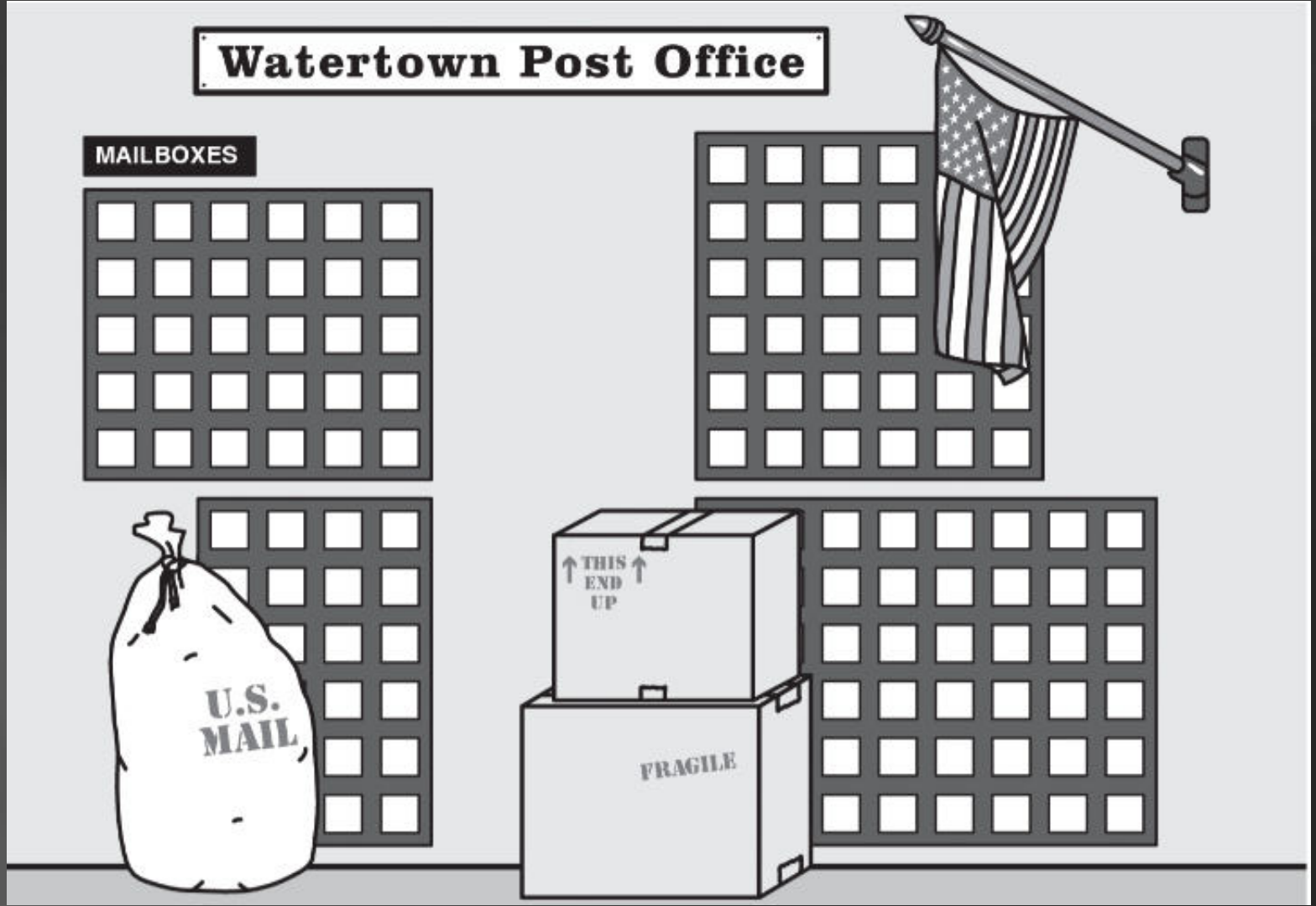
- Interpret products of whole numbers
- Use and explain multiplicative strategies to demonstrate an understanding of multiplication
- Solve for the unknown in a multiplication equation involving 3 whole numbers
- Multiply using the commutative property
- Fluently multiply with products to 100 using strategies
- Solve story problems that call for finding the area of a figure that can be decomposed into non-overlapping rectangles
- Reason abstractly and quantitatively
- Construct viable arguments and critique the reasoning of others

Watertown's Largest Window

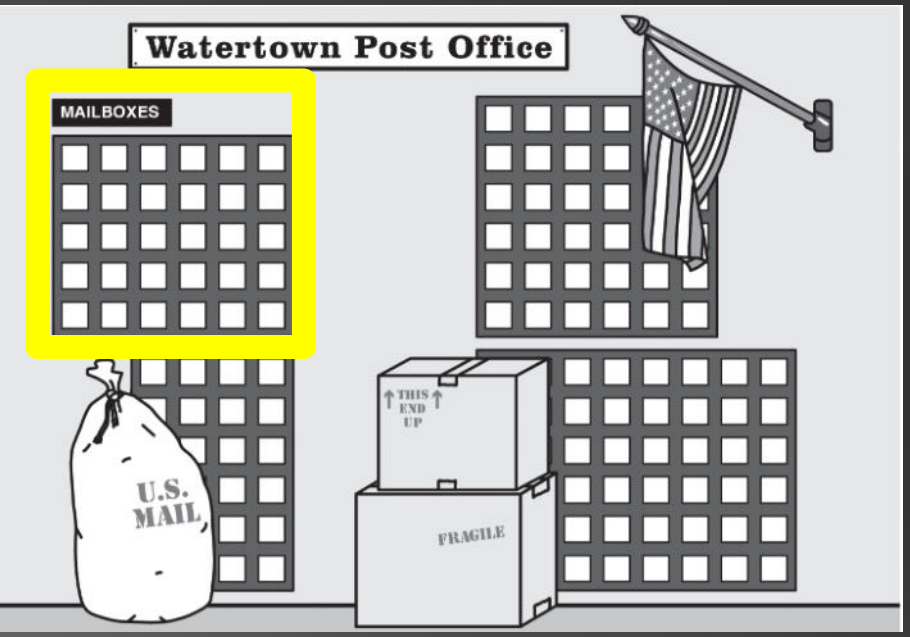
LUND COPY

KLEIBER COPY

WENTWORTH COPY

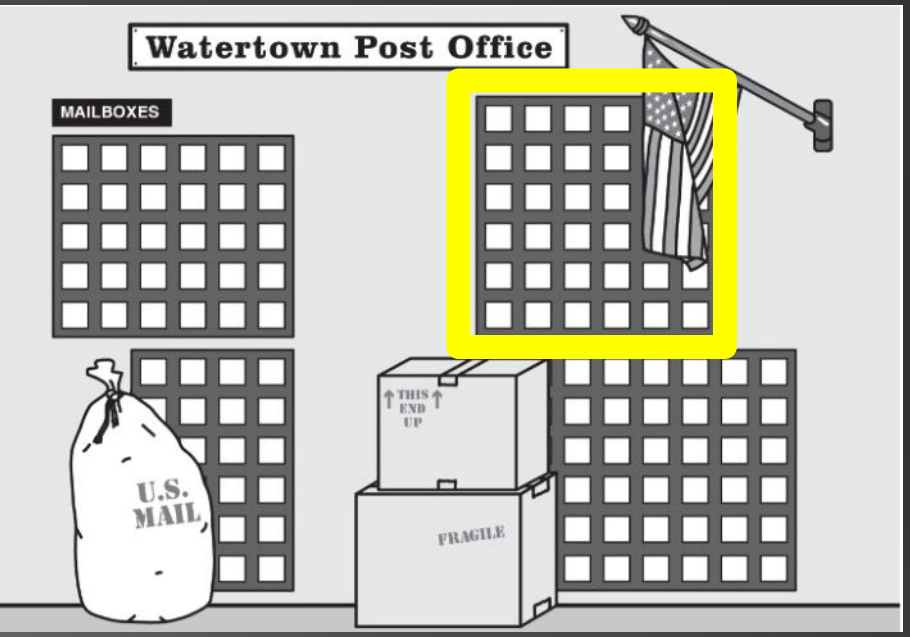

Watertown Post Office
MAILBOXES
U.S. MAIL
THIS END UP
FRAGILE

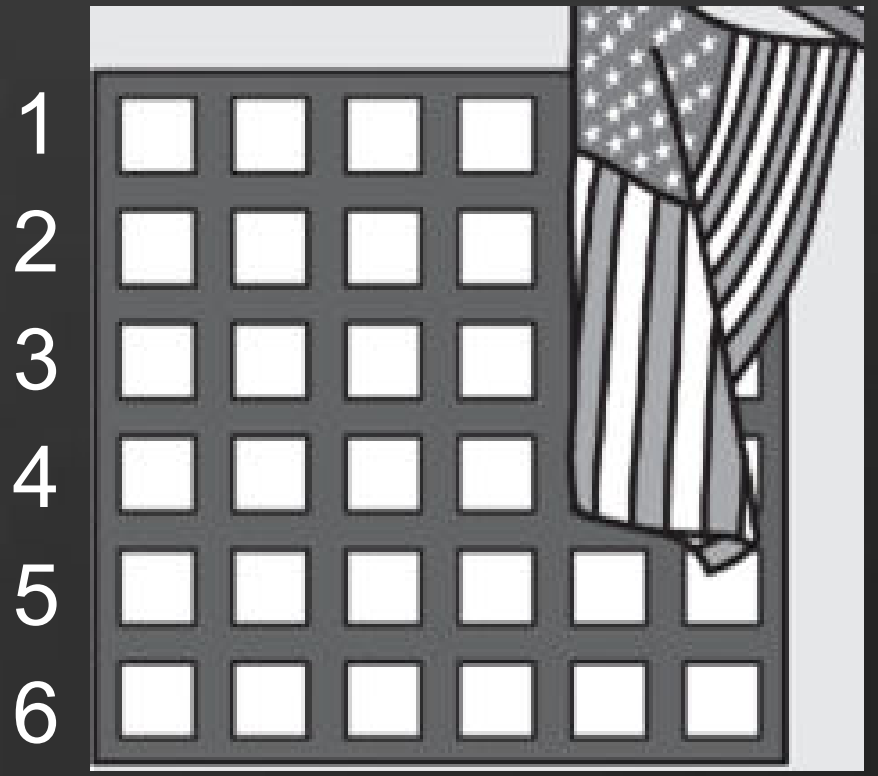
___ X ___ = ___


Watertown Post Office
MAILBOXES
U.S. MAIL
THIS END UP
FRAGILE


MAILBOXES
1
2
3
4
5
1 2 3 4 5 6

___ X ___ = ___

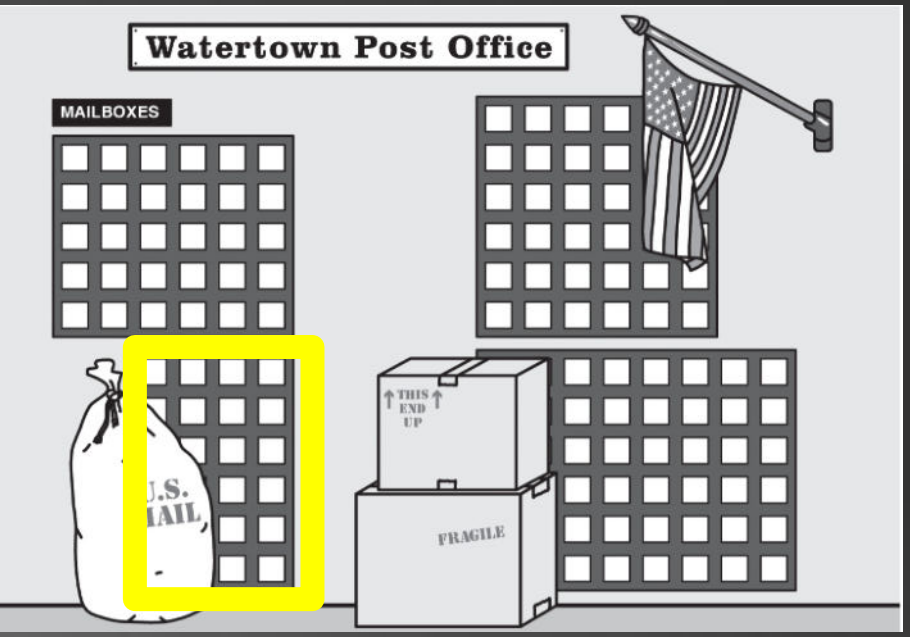




1
2
3
4
5
6

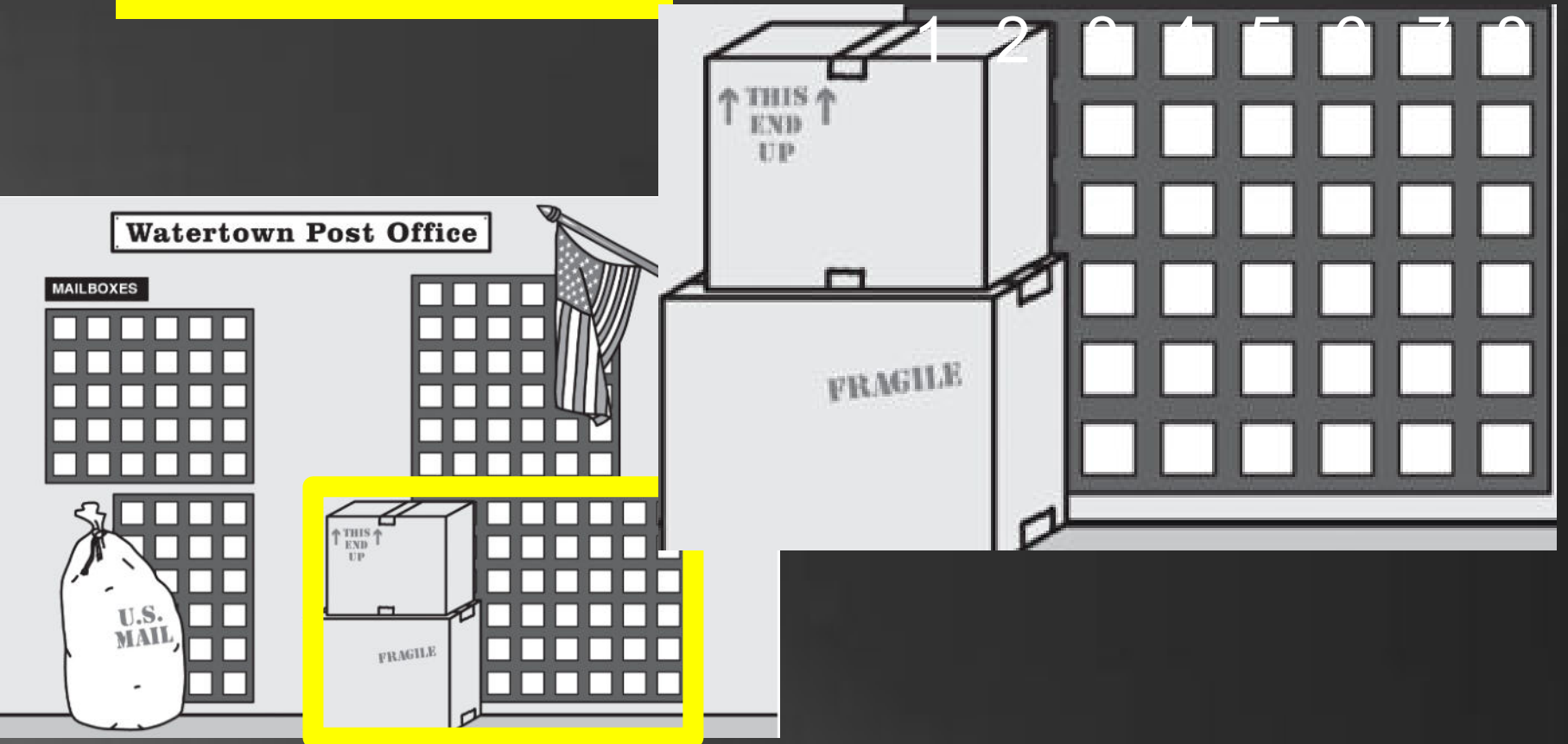
1 2 3 4 5 6

___ X ___ = ___


Watertown Post Office
MAILBOXES
THIS END UP
FRAGILE


U.S. MAIL
1
2
3
4
5
6

___ X ___ = ___

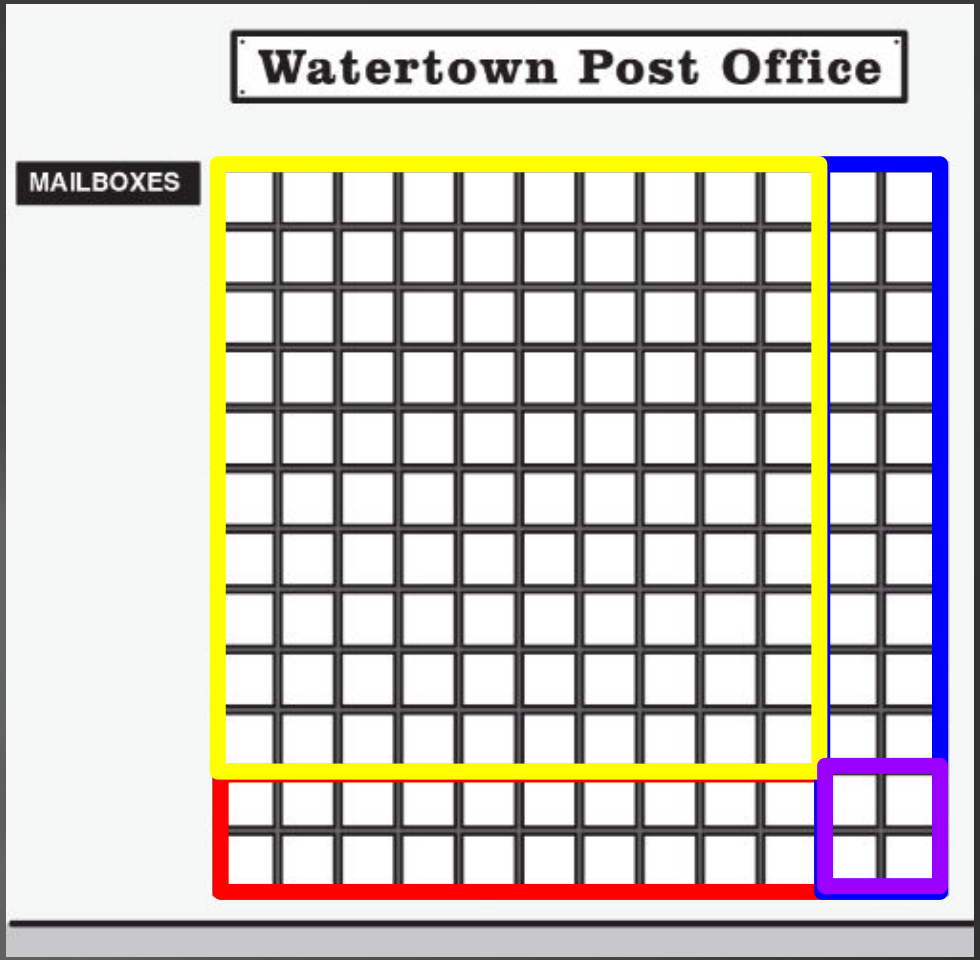

Watertown Post Office
MAILBOXES
U.S. MAIL
THIS END UP
FRAGILE
THIS END UP
FRAGILE
1 2
1
2
3
4
5
6

This entire wall is made up of mailboxes.

Think of efficient ways to figure out how many mailboxes there are in all.

What do you notice about the picture?

What relationships can you see that would help solve the problem?



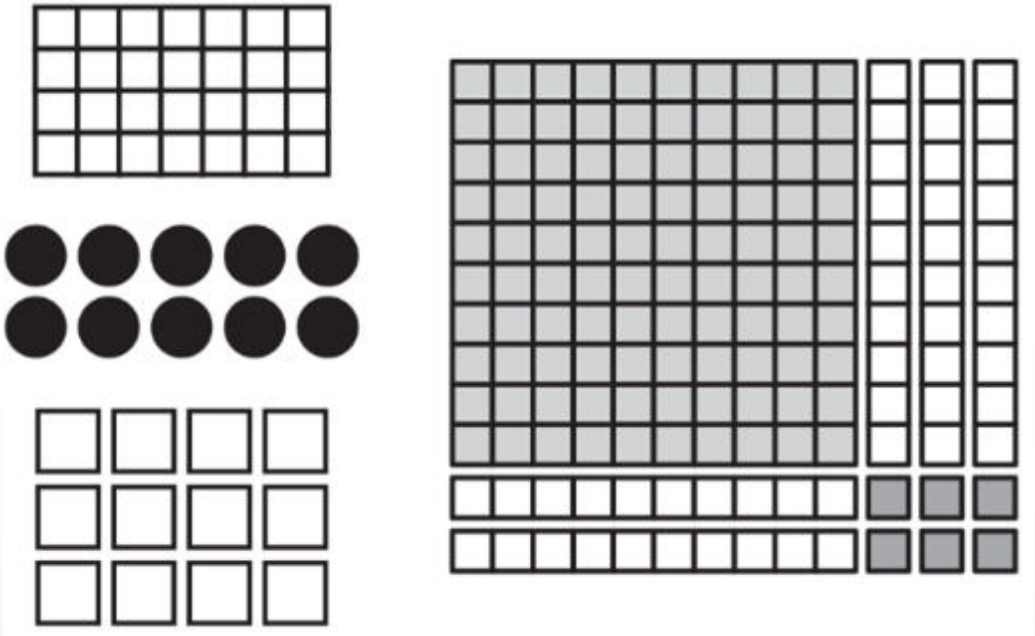
This entire wall is made up of mailboxes.

Think of efficient ways to figure out how many mailboxes there are in all.

What do you notice about the picture?

What relationships can you see that would help solve the problem?

Array: An arrangement consisting of equal rows and equal columns



Cover Up 2C Workplace

Game Board

Work Place 2C Cover Up

Player 1 _____

Player 2 _____

First Array _____
Second Array _____
Third Array _____
Fourth Array _____

Total _____

First Array _____
Second Array _____
Third Array _____
Fourth Array _____

Total _____

Module 3

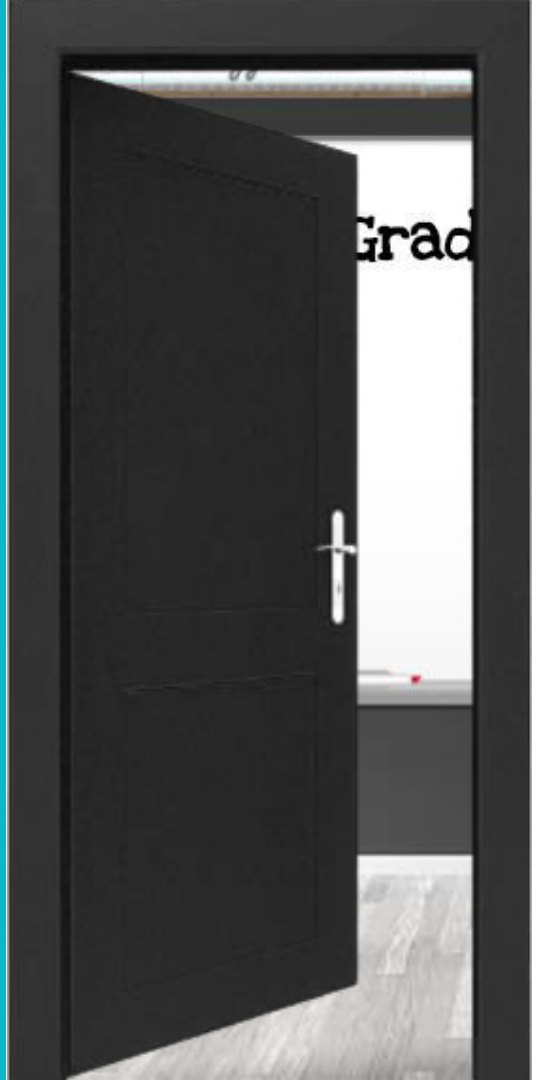
Session 1
Doubling String and Pet Store Story Problems

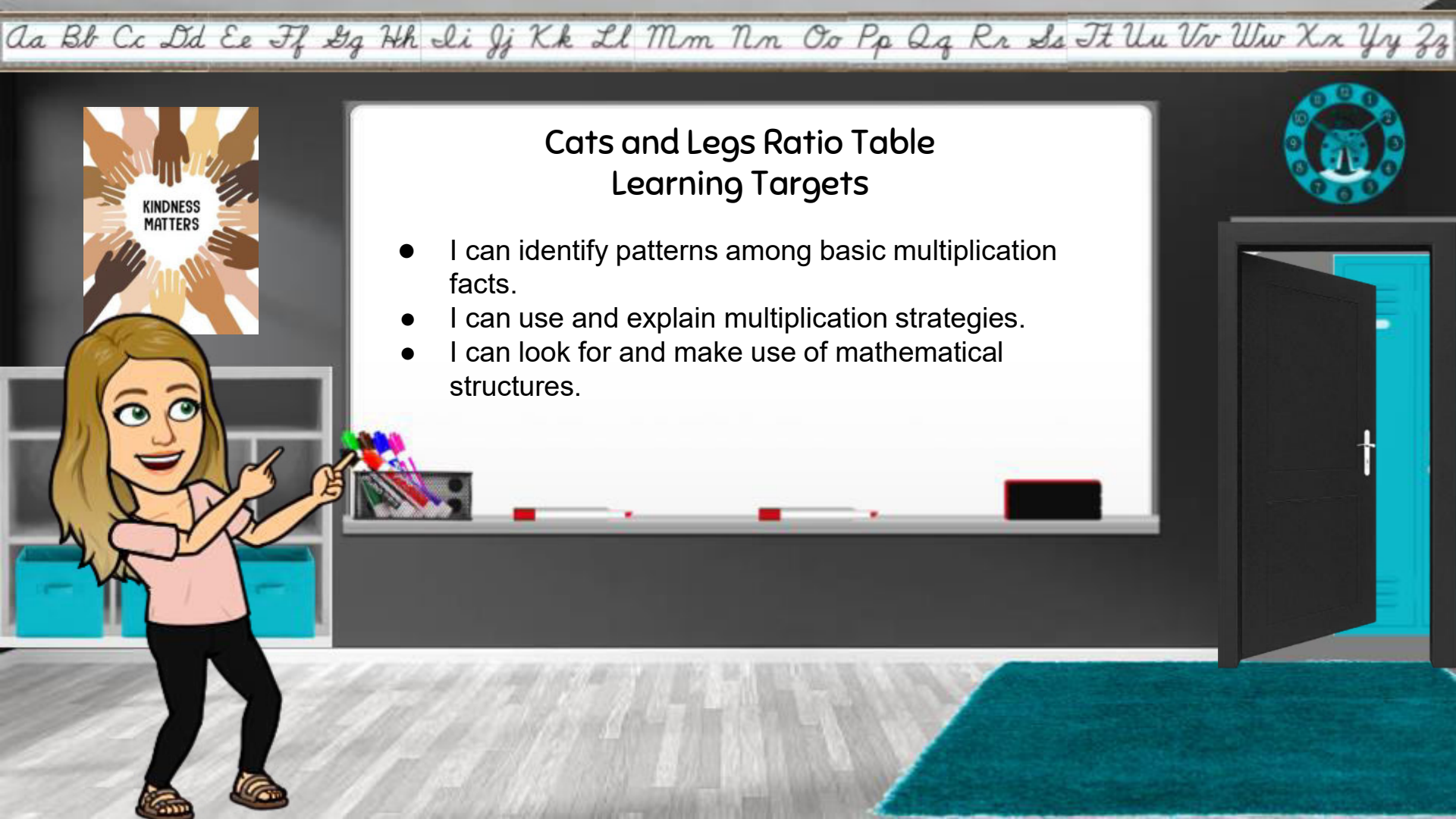
Session 2
Price Lists

Session 3
Multiplication Strategies Part 1

Session 4
Multiplication Strategies Part 2

Session 5
Ice Cream Survey



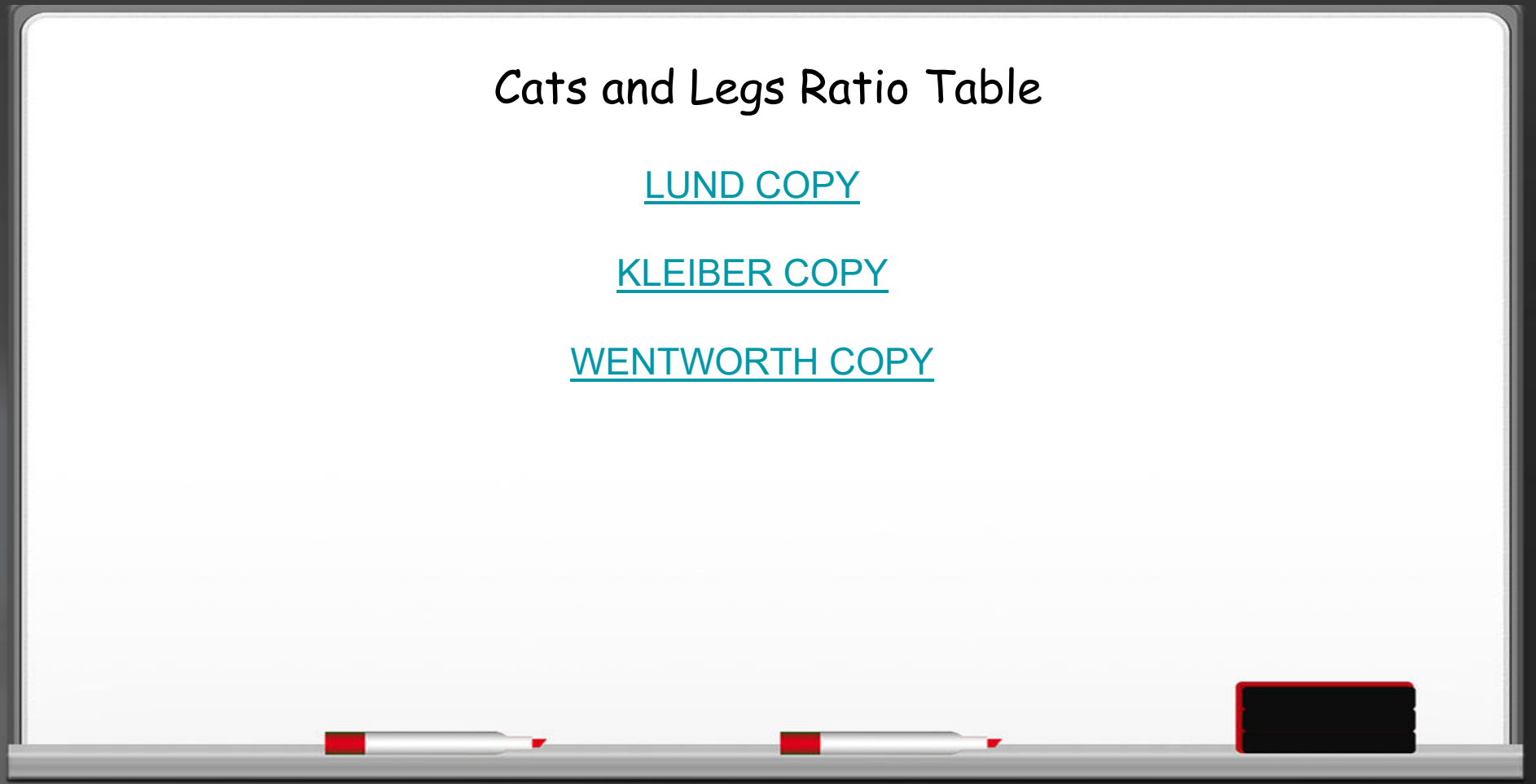

Cats and Legs Ratio Table
Learning Targets
I can identify patterns among basic multiplication facts.
I can use and explain multiplication strategies.
I can look for and make use of mathematical structures.
KINDNESS MATTERS

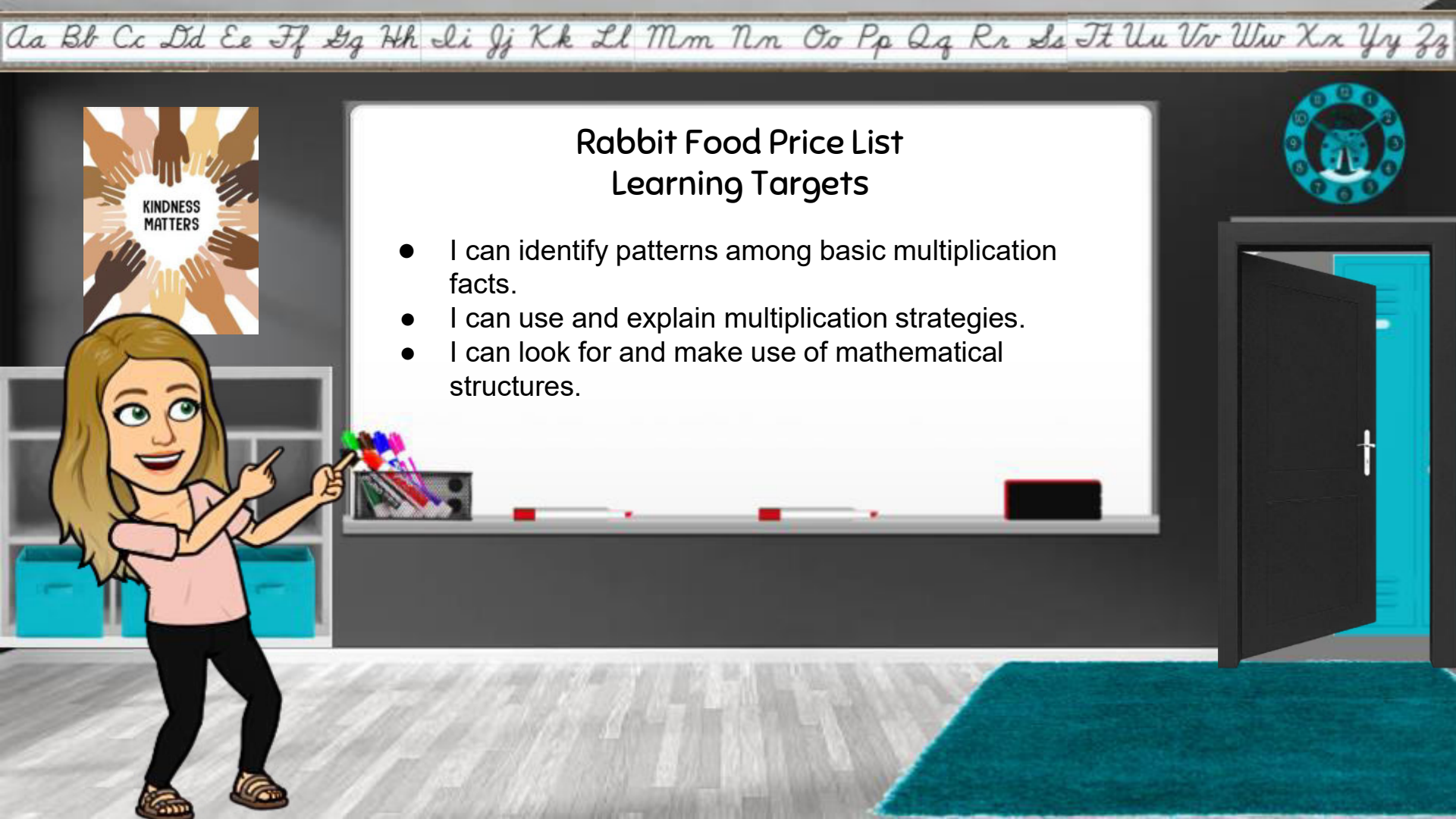
Cats and Legs Ratio Table

LUND COPY

KLEIBER COPY

WENTWORTH COPY




Rabbit Food Price List
Learning Targets
I can identify patterns among basic multiplication facts.
I can use and explain multiplication strategies.
I can look for and make use of mathematical structures.
KINDNESS MATTERS

Rabbit Food Price Lists

LUND COPY

KLEIBER COPY

WENTWORTH COPY

Module 4

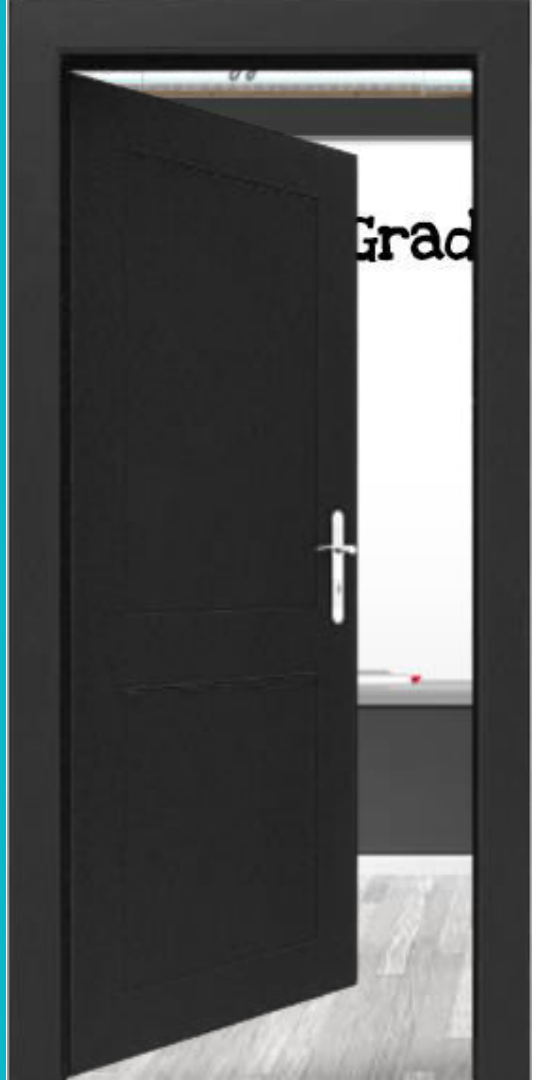
Session 1
Book Lover's Survey

Session 2
Library Books Data

Session 3
Library Books Problems

Session 4
Unit 2 Review

Session 5
Unit 2 Review



Book Lovers Survey
Learning Targets

- I can model with mathematics.
- I can attend to precision.
- I can answer questions about a graph or chart.

Copies of Math Slides

Kleiber

Lund

Wentworth

Our Class Graph
Learning Targets

- I can model with mathematics.
- I can attend to precision.
- I can answer questions about a graph or chart.

Copies of Math Slides

Kleiber

Lund

Wentworth

Comparing Graphs
Learning Targets

- I can model with mathematics.
- I can attend to precision.
- I can answer questions about a graph or chart.

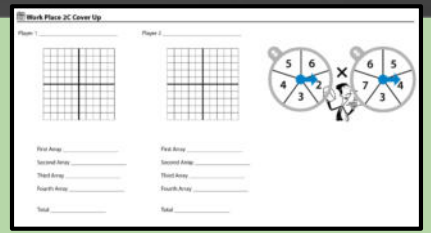
Copies of Math Jamboard

Comparing Graphs

Workplace 2C Cover Up
Learning Targets

- I can model with mathematics.
- I can attend to precision.
- I can answer questions about a graph or chart.

Link to Workplace




Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm Nn Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz