SUMMER ACADEMY

ATLANTA PUBLIC SCHOOLS

Grade 7 Math

Student Booklet

Name: ____________________________

School: ____________________________

Teacher: ____________________________

130 Trinity Avenue, SW
Atlanta, GA 30303

ATLANTA PUBLIC SCHOOLS
Making A Difference

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ATLANTA PUBLIC SCHOOLS
Making A Difference

Secondary Student
Mathematics Interest Inventory

Student Name (First and Last):____

Teacher:______________________________ School: ____________________________

Student ID: Write in and bubble the 6-digit district ID number

0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

Current Grade Level

6th ☐

7th ☐

8th ☐

9th ☐

Gender

Male ☐

Female ☐

<u>Directions:</u>

We are trying to understand what students think about the work they do for mathematics class. On the following pages are some examples of what students might think. Please give us your rating for each question.

Different students have different interests, so there are NO right or wrong answers. Your answers will **NOT** be used towards your grade. Please answer these questions honestly, and tell use what you **really** think.

<u>Practice Questions</u>

	Strongly **DISAGREE**		Neutral		Strongly **AGREE**
1. How good at science are you?	1	2	3	4	5
2. How good at reading are you?	1	2	3	4	5

Please bubble in the choice that best describes what you think. You can use a pen or pencil. If you make a mistake, either erase it or cross it out completely and bubble the correct choice.

How much do you agree or disagree with the following statements?

	Strongly DISAGREE		Neutral		Strongly AGREE
1. I enjoy studying math……………………………………….	1	2	3	4	5
2. Math is very hard for me……………………………….	1	2	3	4	5
3. Doing math is easy for me………………………………….	1	2	3	4	5
4. I enjoy playing math games…………………………………	1	2	3	4	5
5. I do math problems on my own "just for fun."…………...…	1	2	3	4	5
6. I enjoy doing math puzzles………………………………….	1	2	3	4	5
7. I look forward to learning new math………………………..	1	2	3	4	5
8. I hate math…………………………………………………...	1	2	3	4	5
9. Math comes easily to me…………………………………….	1	2	3	4	5
10. I love math………………………………………………....	1	2	3	4	5
11. I can tell if my answers in math makes sense…………...…	1	2	3	4	5
12. I can solve difficult math problems………………………....	1	2	3	4	5
13. Math is boring…………………………………………...…	1	2	3	4	5
14. Math is confusing to me……………………………………	1	2	3	4	5
15. Math is fun………………………………………………....	1	2	3	4	5
16. I am really good at math………………………………....	1	2	3	4	5
17. I understand math…………………………………………..	1	2	3	4	5
18. Solving math problems is fun. …………………………….	1	2	3	4	5

Please bubble in the choice that best describes what you think. You can use a pen or pencil. If you make a mistake, either erase it or cross it out completely and bubble the correct choice.

How much do you agree or disagree with the following statements?

	Strongly **DISAGREE**		Neutral		Strongly **AGREE**
22. When working on math, I want to stop and start working on Something else…………………………………………………….	1	2	3	4	5
23. I give up easily when working on math……………………………….	1	2	3	4	5
24. I like to answer questions in math class……………………………….	1	2	3	4	5
25. I feel excited when a new math topic is announced…………………..	1	2	3	4	5
26. I struggle with math…………………………………………………..	1	2	3	4	5
27. I work on math in my spare time…………………………………...	1	2	3	4	5

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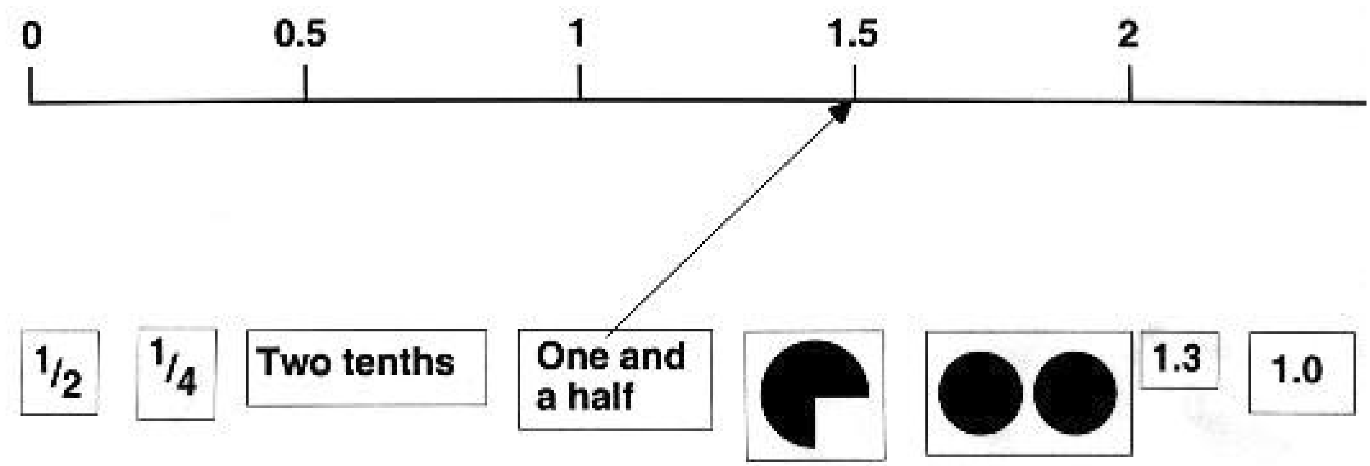
ON THE LINE

This problem gives you the chance to:
- represent simple fractions and decimals on a number line
- explain the meaning of a decimal digit

1. Here is a number line.

Draw arrows to show where each box should go.

One and a half has been done for you.



2. Your friend finds it hard to understand decimals.

She asks "In a number like 2.4 what does the 4 really mean?".

Write a note to help her.

This number is 2.4

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CCGPS Frameworks Student Edition

Mathematics

Grade 7

Unit 1: Operations with Rational Numbers

Dr. John D. Barge, State School Superintendent

"Making Education Work for All Georgians"

Definitions and activities for these and other terms can be found on the Intermath website. Intermath is geared towards middle and high school students.

- **Additive Inverse**: The sum of a number and its additive inverse is zero.
- **Multiplicative Inverse**: Numbers are multiplicative inverses of each other if they multiply to equal the identity, 1.
- **Absolute Value**: The distance between a number and zero on the number line. The symbol for absolute value is shown in this equation: $|-8| = 8$
- **Integers**: The set of whole numbers and their opposites {…-3, -2, -1, 0, 1, 2, 3…}
- **Long Division:** Standard procedure suitable for dividing simple or complex multi-digit numbers. It breaks down a division problem into a series of easier steps.
- **Natural Numbers**: The set of numbers {1, 2, 3, 4,…}. Natural numbers can also be called counting numbers.
- **Negative Numbers**: The set of numbers less than zero.
- **Opposite Numbers**: Two different numbers that have the same absolute value. Example: 4 and -4 are opposite numbers because both have an absolute value of 4.
- **Positive Numbers**: The set of numbers greater than zero.
- **Rational Numbers**: The set of numbers that can be written in the form a/b where a and b are integers and $b \neq 0$.
- **Repeating Decimal:** A decimal number in which a digit or group of digits repeats without end.
- **Terminating Decimal:** A decimal that contains a finite number of digits.
- **Zero Pair**: Pair of numbers whose sum is zero.

Models for Teaching Operations of Integers

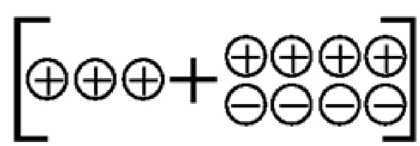
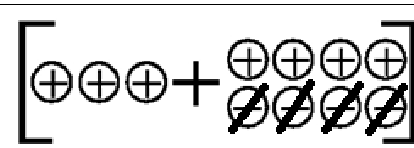
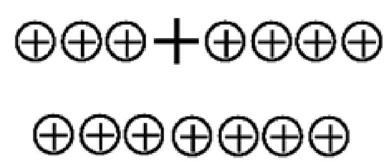
These models have been adapted from http://teachers.henrico.k12.va.us/math/hcpsalgebra1/.

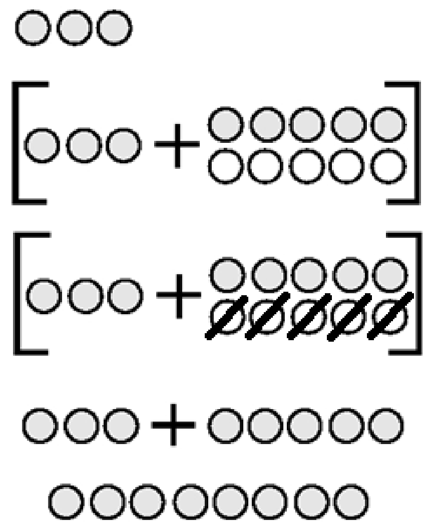
The following are some everyday events that can be used to help students develop a conceptual understanding of addition and subtraction of integers.

- Getting rid of a negative is a positive. For example: Johnny used to cheat, fight and swear. Then he stopped cheating and fighting. Now he only has 1 negative trait so…
  (3 negative traits) - (2 negative traits) = (1 negative trait) or (-3) - (-2) = (-1)
- Using a credit card example can make this subtraction concept clearer. If you have spent money you don't have (-5) and paid off part of it (+3), you still have a negative balance (-2) as a debt, or (-5) + 3 = (-2).
- Draw a picture of a mountain, the shore (sea level) and the bottom of the ocean. Label sea level as 0.

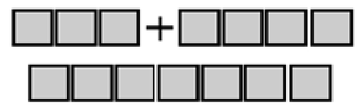
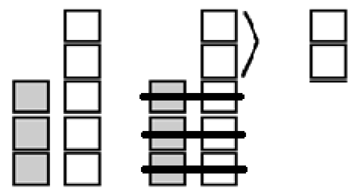
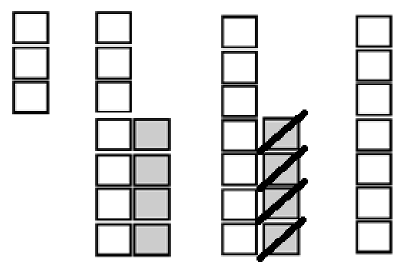
Any of the following models can be used to help students understand the process of adding or subtracting integers. If students have trouble understanding and using one model you can show students how to use another model.

1. The Charged Particles Model (same as using two-color counters)

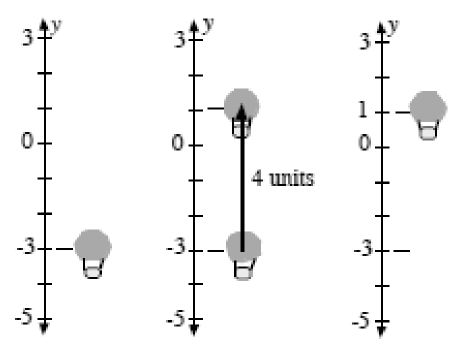
When using charged particles to subtract, 3 – (-4) for example, you begin with a picture of 3 positive particles.	
Since there are no negative values to “take away”, you must use the Identity Property of Addition to rename positive 3 as 3 + 0. This is represented by 4 pairs of positive and negative particles that are equivalent to 4 zeros.	
Now that there are negative particles, you can “take away” 4 negative particles.	
The modeled problem shows that the result of subtracting 4 negative particles is actually like adding 4 positive particles. The result is 7 positive particles. This is a great way to show why 3 – (-4) = 3 + 4 = 7	

<table>
<tr><th colspan="2">Two-Color Counters Method</th></tr>
<tr><td>When using two-colored counters you would use the yellow side to represent positive integers and the red side to represent negative numbers.
The problem represented is -3 – 5.</td><td></td></tr>
</table>

2. The Stack or Row Model

To model positive and negative integers, use colored linking cubes and graph paper. Graph paper and colored pencils will allow students to record problems and results. Students should also write the problems and answers numerically.	
Create stacks or rows of numbers with the colored linking cubes and combine/compare the cubes. If the numbers have the same sign, then the cubes will be the same color. Stress that adding is like *combining*, so make a stack or row to show this.	(-3) + (-4) = (-7) 
If the numbers are not the same sign (color), for example -3 + 5, you compare the stacks of different colors. Using the concept of zero pairs, the result is the difference between the stacks or the result is based on the higher stack. This is easy to see and understand.	
For subtraction you create zeros by pairing one of each color. Then add as many zeros to the first number as needed so that you can take away what the problem calls for. Now physically take away the indicated amount and see what is left. The example problem shown is 3 – (-4).	

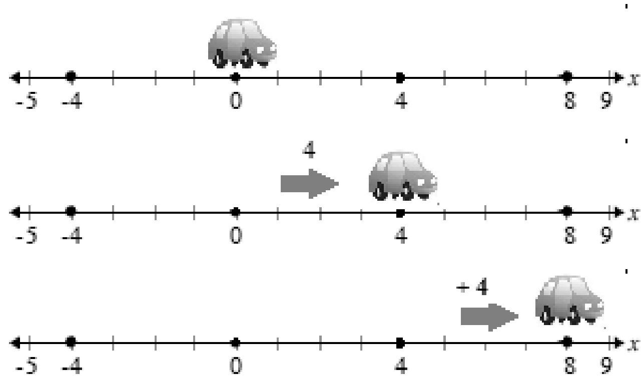
3. The Hot Air Balloon Model

Sand bags *(negative integers)* and Hot Air bags *(positive integers)* can be used to illustrate operations with integers. Bags can be put on (added to) the balloon or taken off (subtracted).	
Here is an example: -3 - (-4) = ? • The balloon starts at -3 (think of the balloon being 3 feet below sea level or 3 feet below the level of a canyon) and you take off 4 sand bags. • Now, think about what happens to a balloon if you remove sand bags, the balloon gets lighter. So, the balloon would go up 4 units. If you think in terms of a *vertical number line*, it would start at -3 and end up at 1, so -3 - (-4) = 1. To help students make the connection between -3 - (-4) and -3 + (+4), present the addition and subtraction questions using the same numbers.	
Another example would include the first addition question as 9 + (-5) and the first subtraction question would then be 9 - (+5). The students see that *putting on* 5 sand bags (negative) produces the same result as *taking off* 5 hot air bags (positive).	

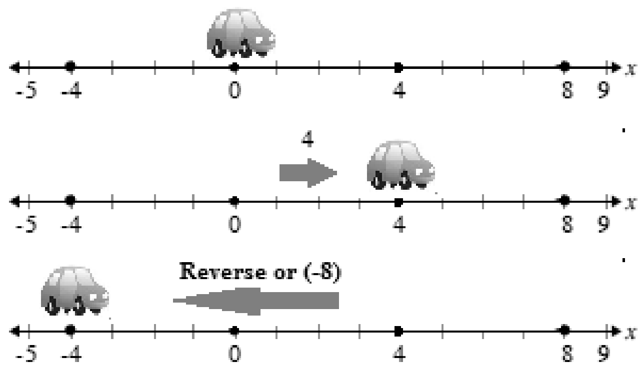
4. The Number Line Model

You can describe addition and subtraction of integers with a number line and a toy car. The car faces forward (to the right) to represent a positive direction. The car is moved forward to represent a positive integer. The car flips around backward (facing left) to represent a negative direction or subtraction. The car is moved backward (reverse) to represent a negative integer.

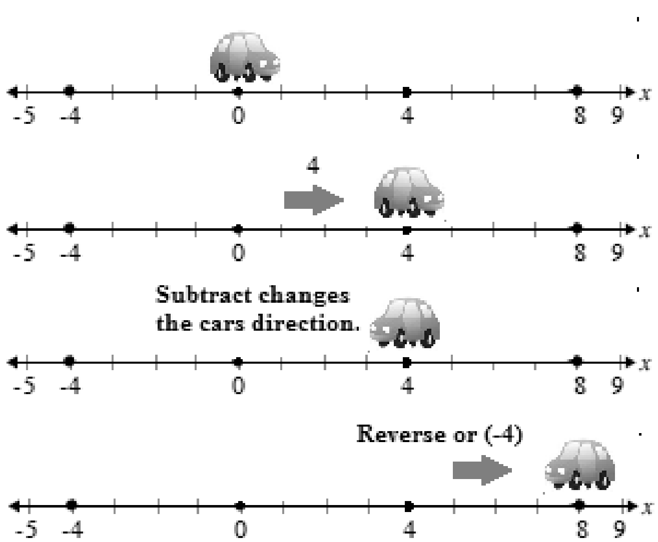
<u>Example 1</u>: 4 + 4 = 8



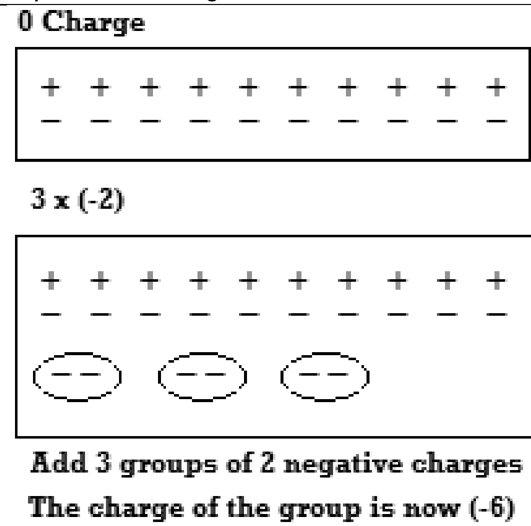
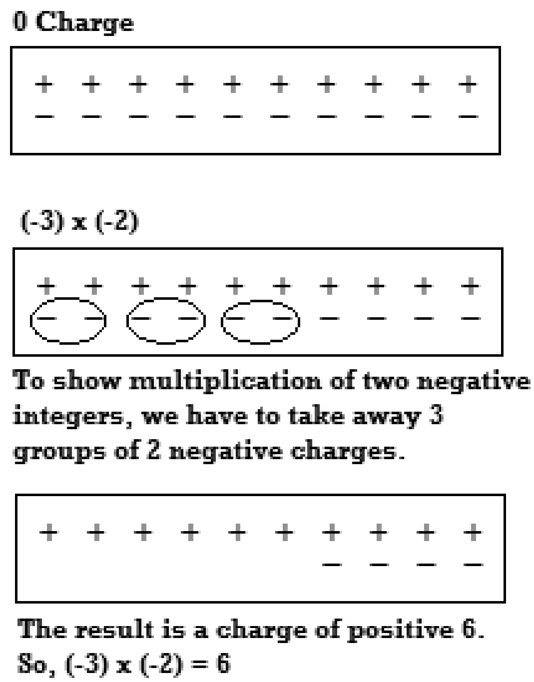
<u>Example 2</u>: 4 + (- 8) = -4



<u>Example 3:</u> 4 – (-4) = 8



5. Charged Particle Model for Multiplication

The charged particle method can be used to illustrate multiplication of integers.	
To begin, a model with a 0 charge is illustrated. The 0 charge model will allow us to work with positive and negative integers. <u>Example 1</u>: In this problem, 3 x (-2), three groups of two negative charges is added to the 0 charged field. The result is (-6).	
<u>Example 2</u>: (-3) x (-2) = ?	

For more resources of multiplication and division of integers, see pages 144 – 146 of
Van de Walle, J., & Lovin, L.H. (2006). *Teaching student-centered mathematics: Grades 5-8.* Boston, MA: Pearson Education and Allyn & Bacon.

Learning Task: What's Your Sign?

In 6th Grade, you were introduced to signed numbers (positive and negative) using a thermometer. In addition, you learned about absolute value (the distance a number is from zero on the number line), and opposites (two numbers that have the same absolute value).

In this unit, you are going to learn how to add, subtract, multiply and divide integers (whole numbers and their opposites) and rational numbers (fractions and decimals that are both positive and negative).

Number lines and counters are useful in demonstrating understanding of operations with integers.

1. Find four pairs of integers with a sum of 5. Explain your process.
(Use positive integers only.)

Pair		Sum	Equation

2. Find four pairs of integers with a sum of 5. Explain your process.
(Use at least one positive integer and at least one negative integer for each pair of integers.)

Pair		Sum	Equation

3. Find a pair of negative integers with a sum of 5. What do you notice about the result? Explain your findings.

4. What do you notice when adding integers?
   Look at your results from problems 1-3 to help you.

For the following examples, write an equation (show numerically) <u>and</u> draw a model using a number line or colored counters to help explain your answer.

5. Explain (-2) + 5.

6. Explain 7 + 8.

7. Explain (-3) + (-4).

8. Explain 5 + (-8).

9. Explain $a + b$ if both a and b are positive numbers.

10. Explain ($-a$) + ($-b$) if ($-a$) and ($-b$) both represent negative numbers.

11. Explain a + ($-b$) if a represents any positive number and ($-b$) represents any negative number.

12. Explain $b + (-a)$ if b represents any positive number and $(-a)$ represents any negative number.

13. Explain 2 + 8 + (-7).

14. Explain $a + b + -c$ if a and b represent positive numbers and $(-c)$ represents a negative number.

Learning Task: Hot Air Balloons

What happens to the balloon when…		**Mathematically**
Add bags of gas	**Balloon goes up**	3 bags of gas (+3) 10 bags of gas (+10)
Add bags of sand	**Balloon goes down**	3 bags of sand (-3) 10 bags of sand (-10)
Subtract bags of gas	**Balloon goes down**	Subtract 3 bags of gas – (+3) Subtract 10 bags of gas – (+10)
Subtract bags of sand	**Balloon goes up**	Subtract 3 bags of sand –(-3) Subtract 10 bags of sand – (-10)

When using hot air balloons to add or subtract integers, there are several important things to remember. They are:

- The first number indicates where the balloon starts.
- The sign tells you if you will be adding or subtracting something from the balloon. An addition sign tells you that you will be adding something to the hot air balloon and a subtraction sign tells you that you will be subtracting something from the balloon
- The second number tells you what you will add or subtract from the balloon (either bags of gas if the number is positive or bags of sand if the number is negative).

Use a number line and a model of a hot air balloon. Model each problem and answer the questions that follow.

1. $\mathbf{-3 + 6}$

A. Where does the balloon start?

B. Do you add or subtract something from the balloon?

C. What do you add or subtract from the balloon?

D. Where does the balloon end up?

2. $\mathbf{4 + (-7)}$

A. Where does the balloon start?

B. Do you add or subtract something from the balloon?

C. What do you add or subtract from the balloon?

D. Where does the balloon end up?

3. $\mathbf{3 + (-5)}$

A. Where does the balloon start?

B. Do you add or subtract something from the balloon?

C. What do you add or subtract from the balloon?

D. Where does the balloon end up?

4. $\mathbf{-2 + (9)}$

A. Where does the balloon start?

B. Do you add or subtract something from the balloon?

C. What do you add or subtract from the balloon?

D. Where does the balloon end up?

5. What do you think happens to the balloon if you take away sand instead of adding sand?

6. What do you think happens to the balloon if you take away gas bags instead of adding gas bags?

7. $\mathbf{6 - 9}$

A. Where does the balloon start?

B. Do you add or subtract something from the balloon?

C. What do you add or subtract from the balloon?

D. Where does the balloon end up?

8. $-3-(-9)$

A. Where does the balloon start?

B. Do you add or subtract something from the balloon?

C. What do you add or subtract from the balloon?

D. Where does the balloon end up?

9. $-1-(-3)$

A. Where does the balloon start?

B. Do you add or subtract something from the balloon?

C. What do you add or subtract from the balloon?

D. Where does the balloon end up?

10. $-6-2$

A. Where does the balloon start?

B. Do you add or subtract something from the balloon?

C. What do you add or subtract from the balloon?

D. Where does the balloon end up?

Model the following with your balloon and number line to answer each. Describe what you did with the air balloon.

11. $-2+(-5)$

12. $4+(-9)$

13. $-2+8$

14. $5-9$

15. $8-(-6)$

Learning Task: Multiplying Integers

You have recently practiced multiplying positive and negative integers with two-color counters. It is now your turn to model how to multiply. Below are "hints" to help you get started.

Remember that multiplication of whole numbers is often related to repeated addition. In elementary school, you learned that $3 \cdot 5$ represents three sets or groups of five. Therefore you added three sets of five.

(+ + + + +) (+ + + + +) (+ + + + +)

Three sets of five equal fifteen. To apply this idea to multiplication involving positive and negative integers, let's look at some sample problems.

1. When multiplying integers:
   - The sign of the first factor tells us if we are "adding" or" taking away" sets.
   - The first factor tells us how many sets.
   - The sign of the second factor tells us what color (red or yellow) the groups consist of.
   - The second factor tells us how many are in each set.

2. If the first factor is a negative integer, you have to "take away" sets of counters. To "take-away" counters, you will add as many zero-pairs as needed until you have enough counters to "take away".

<u>Model the following with two-color counters</u>.

1. $(2)(6)$

A. How is this read?

B. Model with your counters.

C. What is the solution?

2. $(5)(3)$

A. How is this read?

B. Model with your counters.

C. What is the solution?

3. $(-3)(2)$

A. How is this read?

B. Model with your counters.

C. What is the solution?

4. $(-4)(3)$

A. How is this read?

B. Model with your counters.

C. What is the solution?

5. $(2)(-4)$

A. How is this read?

B. Model with your counters.

C. What is the solution?

6. $(6)(-3)$

A. How is this read?

B. Model with your counters.

C. What is the solution?

7. $(-4)(-2)$

A. How is this read?

B. Model with your counters.

C. What is the solution?

8. $(-2)(-5)$

A. How is this read?

B. Model with your counters.

C. What is the solution?

Let's look to see if there are any patterns.

1. Since multiplying two positive numbers is like adding groups, what happens when you add groups of positives numbers? Is the answer positive or negative?
   Is this **always** true?

2. Since multiplying a negative number and a positive number removes all positive numbers from the group, what is the result of adding the remaining negative numbers? Is the answer positive or negative? Is this **always** true?

3. Since multiplying a positive number and a negative number is like adding together groups of negative numbers, what is the result? Is the answer positive or negative?

4. Since multiplying a negative number and a negative number removes all negative numbers from the group, what is the result of adding the remaining positive numbers? Is the answer positive or negative? Is this **always** true?

Learning Task: Multiplying Rational Numbers

You have recently practiced multiplying positive and negative integers on a number line. It is now your turn to model how to multiply. Below are "hints" to help you get started.

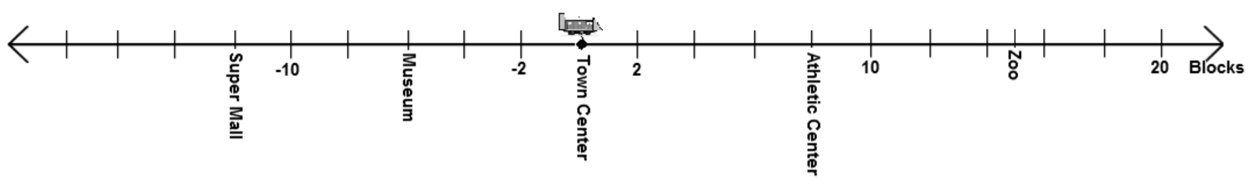
The rules for moving along the number line are as follows:

- Moving to the left or west means moving in a negative direction.
- Moving to the right or east means moving in positive direction.
- Time in the future is represented by a positive value.
- Time in the past is represented by a negative value.

Multiplying Using the Number Line Model

<u>Try these problems on your own.</u>

In the city of Mathematica, there is a town center which attracts many visitors to the city. From the town center, a train takes visitors to different popular locations. The map shows a few favorite destinations that people like to visit. Answer the following problems about traveling around the city.



1. The train leaves Town Center traveling east at the speed of 2 blocks per minute. How many blocks will you be in 4 minutes? Where will you be in 4 minutes?

2. The train leaves the Town Center going west at 2 blocks per minute. What popular location will you arrive at in 6 minutes? How many blocks away from the Town Center will you be?

3. The train passes through the Town Center going east at 2 blocks per minute. Where was that train 3 minutes ago?

4. You would like to take the train to the Zoo from the Town Center. How many minutes will this take if the train travels 2 blocks per minute? Write a math sentence to represent this scenario.

5. You waited 4 minutes for the train to arrive. The train was traveling west at 2 blocks per minute. Where was the train?

Let's look to see if there are any patterns.

1. When you moved east (right) and it was time in the future, two positive numbers represented the situation. What was the result on the number line when moving east and moving in the future occurred? Was the result of multiplying positive or negative? Is this **always** true?

2. When you moved east (right) and it was time in the past, a positive number and a negative number represented the situation. What was the result on the number line when moving east and moving in the past occurred? Was the result of multiplying positive or negative? Is this **always** true?

3. When you moved west (left) and it was time in the future, a negative number and a positive numbers represented the situation. What was the result on the number line when moving west and moving in the future occurred? Was the result of multiplying positive or negative? Is this **always** true?

4. When you moved west (left) and it was time in the past, two negative numbers represented the situation. What was the result on the number line when moving west and moving in the past occurred? Was the result of multiplying positive or negative? Is this **always** true?

5. What multiplication patterns can you see from each situation? Fill in the chart below according to the signs of the factors and products.

Factor	Factor	Product
+ number		+ number
	(-) number	(-) number
+ number		(-) number
	(-) number	+ number

Learning Task: Patterns of Multiplication and Division

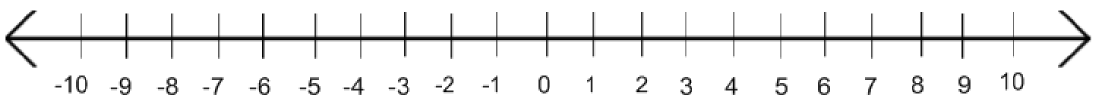
You have recently practiced dividing positive and negative integers on a number line. It is now your turn to model how to divide. Below are "hints" to help you get started.

When you divide, keep in mind these simple steps:

- Identify the dividend on the number line.
- Look at the divisor, is it positive (yellow with right arrow) or negative (red with left arrow).
- Determine how many times the divisor will have to move forward (+) or backward (-) to equal the dividend.
- The number of times it must move and the type of movement determine the answer.

<u>Model the following on the number line</u>.

1. $8 \div 2$

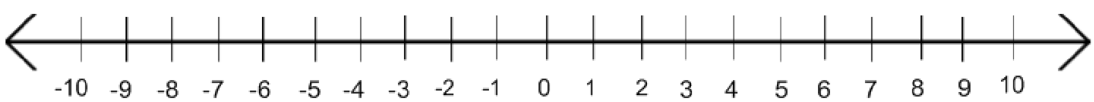


A. What is the dividend?

B. What is the divisor?

C. What is the solution and how did you find it?

2. $(-9) \div 3$

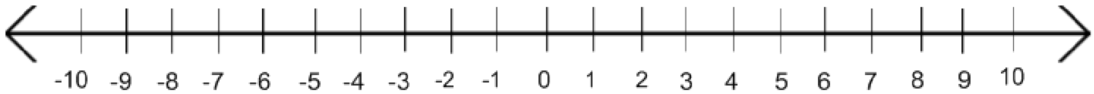


A. What is the dividend?

B. What is the divisor?

C. What is the solution and how did you find it?

3. $(-10) \div 2$

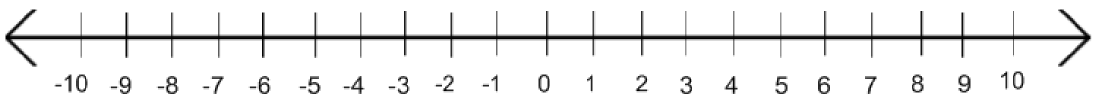


A. What is the dividend?

B. What is the divisor?

C. What is the solution and how did you find it?

4. $6 \div (-2)$

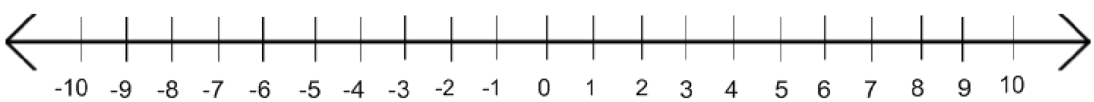


A. What is the dividend?

B. What is the divisor?

C. What is the solution and how did you find it?

5. $8 \div (-2)$

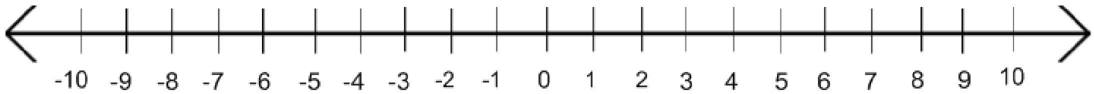


A. What is the dividend?

B. What is the divisor?

C. What is the solution and how did you find it?

6. $(-8) \div (-4)$

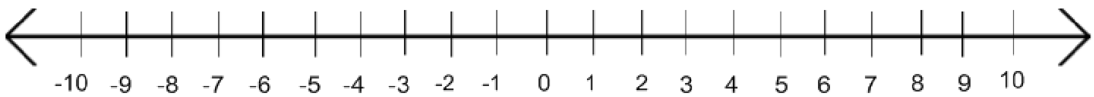


A. What is the dividend?

B. What is the divisor?

C. What is the solution and how did you find it?

7. $(-4) \div (-2)$



A. What is the dividend?

B. What is the divisor?

C. What is the solution and how did you find it?

Let's look to see if there are any patterns.

1. When given a positive integer as the dividend…
    a. What was the result of dividing by a positive integer?

    b. What was the result of dividing by a negative integer?

2. When given a negative integer as the dividend…
    a. What was the result of dividing by a positive integer?

    b. What was the result of dividing by a negative integer?

3. Fill in each table below. Are the patterns the same as the multiplication patterns? Explain your findings.

	Factor	Factor	Product
Multiplication Patterns	+ number		+ number
		(-) number	(-) number
	+ number		(-) number
		(-) number	+ number

	Dividend	Divisor	Divisor
Division Patterns		+ number	+ number
	(-) number		(-) number
	+ number		(-) number
		(-) number	+ number

Calculations

This problem gives you the chance to:
• show understanding of calculations

1. Draw a circle around each calculation that has the same answer as 25 ÷ 2.

Half of 25 $\qquad \frac{25}{2} \qquad 25 \div \frac{1}{2}$

$25 \times 0.5 \qquad 25 \times \frac{1}{2} \qquad 2 \div 25$

2. Which of the situations below have the same answer as 25 ÷ 2?

Check (√) the correct ones.
Cross (**X**) the incorrect ones.

	√ or X
The cost in dollars each person pays if two people share the cost of a $25 meal.	
The number of miles traveled in two hours at 25 miles an hour.	
The amount in pounds each person gets when two pounds of candy is shared by 25 people.	
The weight in pounds of 25 parcels each weighing half a pound.	

8

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Cindy's Cats

This problem gives you the chance to:
- solve fraction problems in a practical context

Cindy has 3 cats: Sammy, Tommy and Suzi.

1. Cindy feeds them on Cat Crunchies.

   Each day Sammy eats $\frac{1}{2}$ of the box, Tommy eats $\frac{1}{8}$ of the box and Suzi eats $\frac{1}{4}$ of the box.

   What fraction of a whole box do the cats eat, in all, each day? ____________

   Show how you figured this out.

2. Tommy and Suzi spend much of each day sleeping.

   Tommy sleeps for $\frac{3}{5}$ of the day and Suzi sleeps for $\frac{7}{10}$ of the day.

   Which of the two cats sleeps for longer? ___________________

   How much longer does it sleep each day? ___________________

   Show how you figured this out.

3. Cindy's cats often share a carton of cat milk.

Sammy always drinks $\frac{1}{3}$ of the carton, Tommy always drinks $\frac{5}{12}$ of the carton, and Suzi always drinks $\frac{1}{6}$ of the carton.

What fraction of the carton of cat milk is left over? ____________________

Show how you figured it out.

4. Cindy's cats love to jump in and out of their cat door.

Yesterday the cat door was used 100 times by her cats.

Sammy used it for $\frac{1}{4}$ of the times and Tommy used it for $\frac{3}{10}$ of the times.

How many times did Suzi use the cat door? ____________________

Explain how you figured it out.

____

____

____

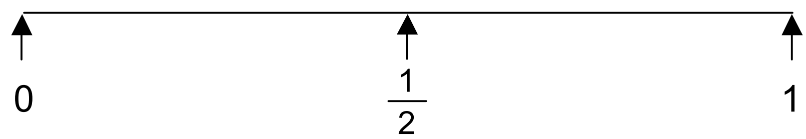
____

8

Fractions

This problem gives you the chance to:
- show the position of fractions on a number line
- compare the sizes of fractions

Here is a number line.



1. Mark the position of the two fractions $\frac{2}{3}$ and $\frac{2}{5}$ on the number line.

2. Explain how you decided where to place $\frac{2}{3}$ and $\frac{2}{5}$ on the number line.

3. Which of the two fractions, $\frac{2}{3}$ or $\frac{2}{5}$, is nearer to $\frac{1}{2}$? ______________

   Explain how you figured it out.

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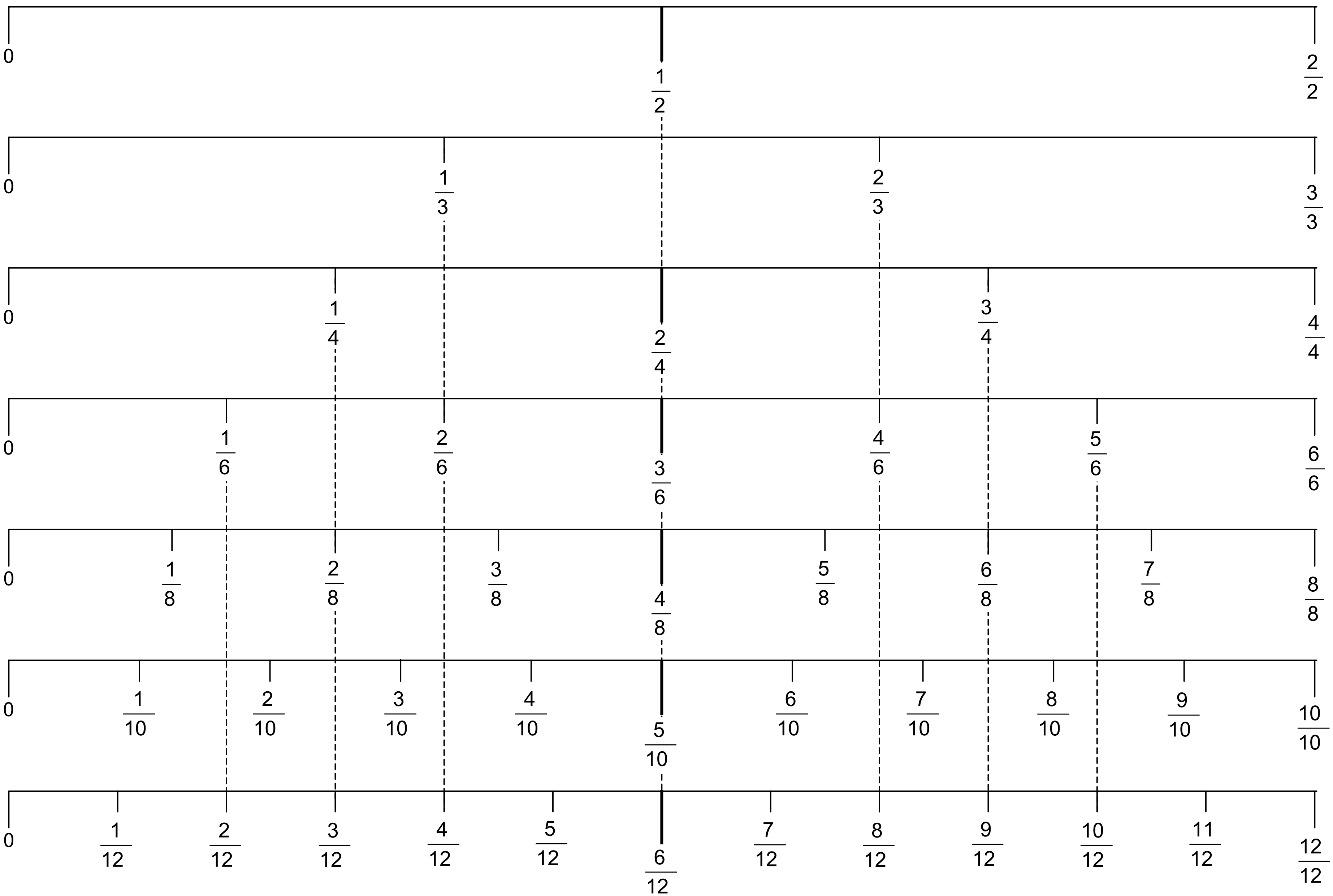
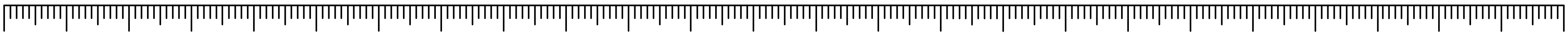
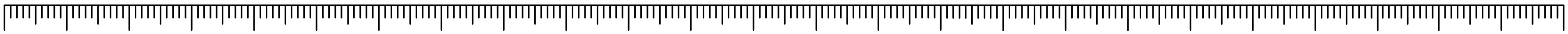
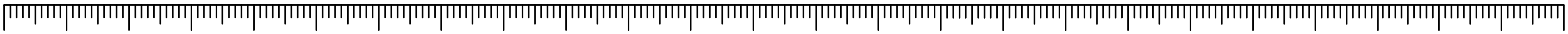
Fraction Number Lines 1

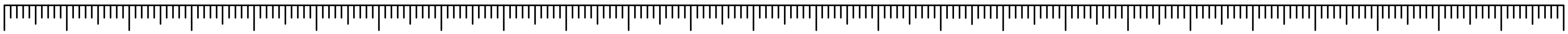


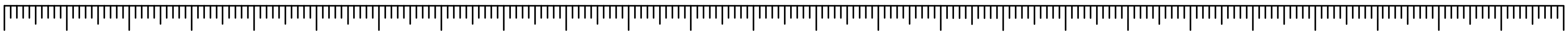
Number Lines (blank 2)



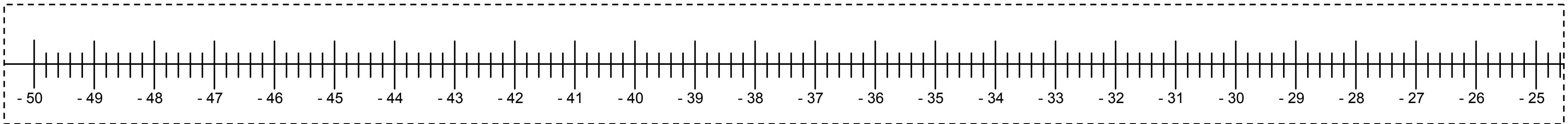


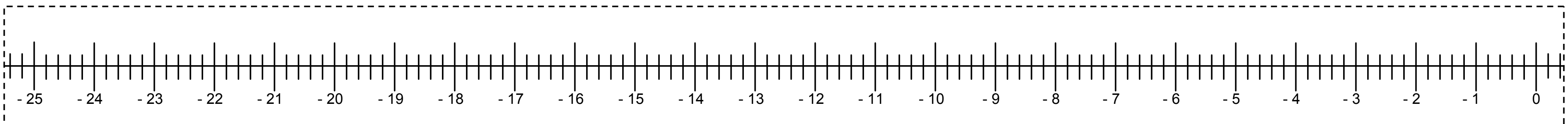


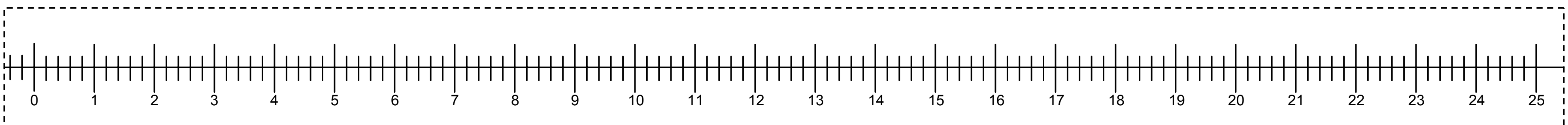


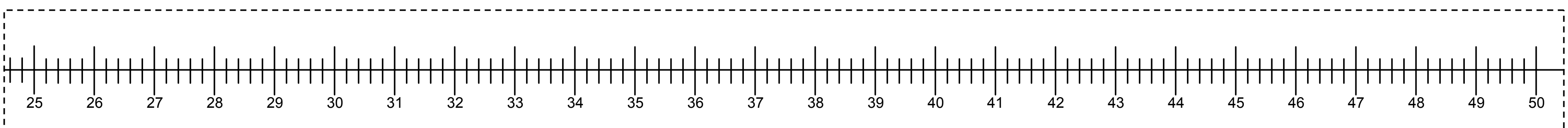


Number Line (integers)









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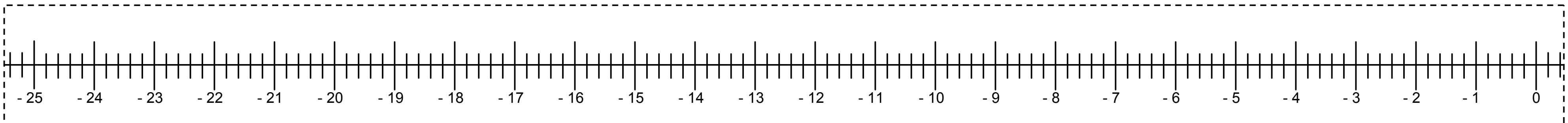
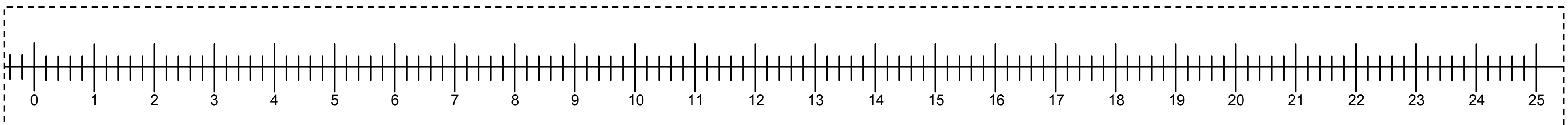
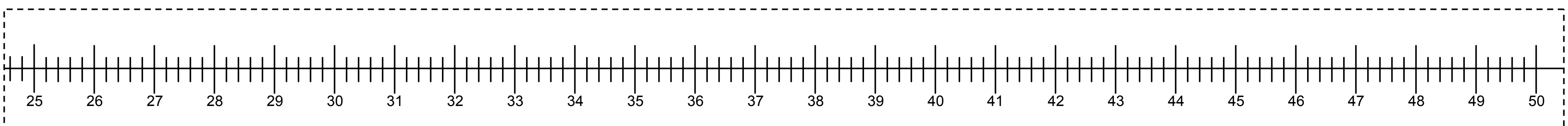
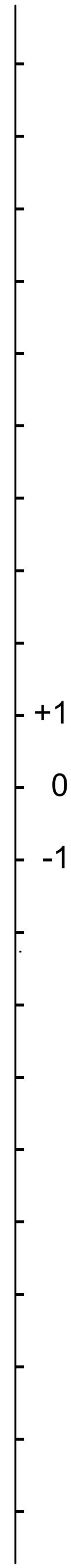


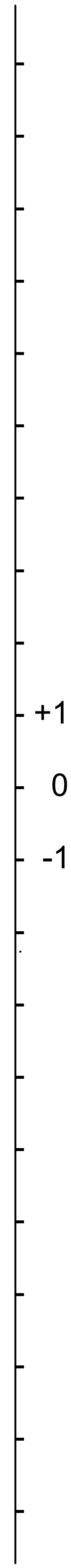




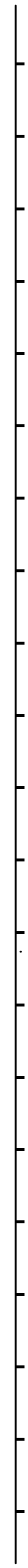
Number Line (vertical with -1, 0, +1)



Number Line (vertical with -1, 0, +1)



Number Line (vertical blank)



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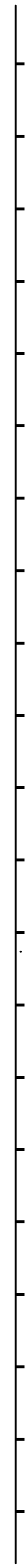

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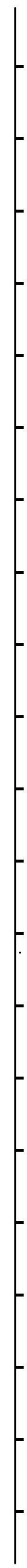

Number Line (vertical blank)