Summer Homework
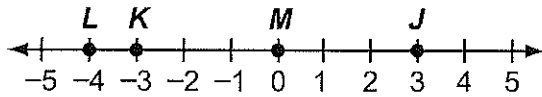
Incoming 7th Graders

Math Packet #1

Name:_____

1 Which point on the number line below represents the opposite of −3?

L K   M   J
−5 −4 −3 −2 −1 0 1 2 3 4 5

Ⓐ J   Ⓒ L
Ⓑ K   Ⓓ M

2 Since last week, the change in value of Nicki's favorite comic book is −$24. Which statement BEST describes the meaning of this change in value?

Ⓐ The comic book is now worth $24.

Ⓑ The comic book is now worth −$24.

Ⓒ The value of the comic book has decreased by $24.

Ⓓ The value of the comic book has increased by $24.

3 Which hiker listed in the table below is at the highest elevation?

Hiker's Elevations

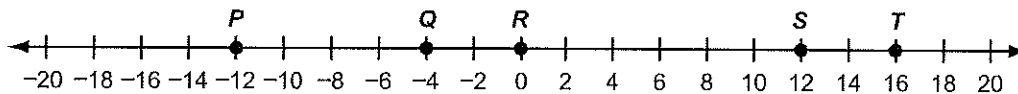| Hiker	Elevation (feet)
Amber	−36
Bobby	105
Claire	−124
Devin	79

Ⓐ Amber   Ⓒ Claire
Ⓑ Bobby   Ⓓ Devin

4 Last night the temperature on a thermometer was −4°F. The temperature this morning was colder than last night. Which could represent the temperature on the thermometer this morning?

Select **all** the correct answers.

Ⓐ 0°F   Ⓓ 10°F
Ⓑ −2°F   Ⓔ −12°F
Ⓒ −5°F

5 Which points on the number line below have the same absolute value?

P   Q   R   S   T
−20 −18 −16 −14 −12 −10 −8 −6 −4 −2 0 2 4 6 8 10 12 14 16 18 20

Ⓐ P and T   Ⓒ R and Q
Ⓑ Q and S   Ⓓ S and P

6 The change in balance of Kevin's savings account last month was −$700. The change in Stella's account was $500, and the change in Peter's account was −$500.

The change in Stella's savings account was _____ the change in Kevin's savings account.

Ⓐ the same as   Ⓑ greater than   Ⓒ less than

_____ account had the greatest change in savings.

Ⓐ Kevin's   Ⓑ Stella's   Ⓒ Peter's

Name _____

7 Annie and Landon are scuba diving together. Annie is located at a depth of −11 meters. Landon is located at a depth of −19 meters.

Write an inequality to compare the depths in meters of Annie and Landon.

_____

8 The height of a flower measures 7 inches.

Plot the height of the flower and its opposite on the number line.

-10 -8 -6 -4 -2 0 2 4 6 8 10
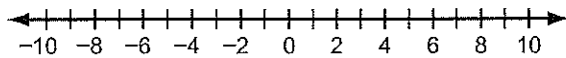
9 The table below lists the temperatures of four locations on Mars.

Temperature on Mars

Location	Temperature (°C)
A	−8
B	6
C	−9
D	0

Write the temperatures in the correct order from warmest to coldest.

_____

10 Place an X in the table to show whether each inequality is true or false.

	True	False
$|-7| > |3|$		
$|-8| < -1$		
$|-4| > |-2|$		

11 Four points are plotted on the number line below.

A   B   C   D
-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6
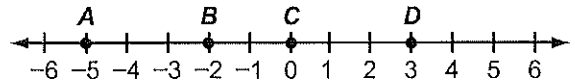
Write the opposite value of each point in the table.

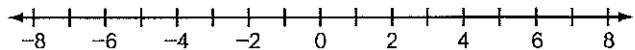| Point	Opposite
A	
B	
C	
D	

12 Three people get on an elevator in a large office building.

- Robert rides it −6 floors.
- Jane rides it 5 floors.
- Terrell rides it −3 floors.

Part A

Plot three points on the number line to represent each person's ride on the elevator.

Floors Ridden on the Elevator

-8   -6   -4   -2   0   2   4   6   8

Part B

Ellen gets on the elevator and rides it 4 floors.

Write an inequality to compare Ellen's ride to Terrell's ride.

_____

1 What is true about $\frac{3}{8}$ and $-\frac{1}{3}$ when plotted on a number line?

Select **all** the true statements.

Ⓐ $\frac{3}{8}$ is less than $-\frac{1}{3}$.

Ⓑ $\frac{3}{8}$ is greater than $-\frac{1}{3}$.

Ⓒ $\frac{3}{8}$ is closer to 0.

Ⓓ $-\frac{1}{3}$ is closer to 0.

Ⓔ $-\frac{1}{3}$ is to the left of $\frac{3}{8}$.

Ⓕ $-\frac{1}{3}$ is to the right of $\frac{3}{8}$.

2 Which point on the number line is the opposite of 1.25?

Ⓐ J

Ⓒ L

Ⓑ K
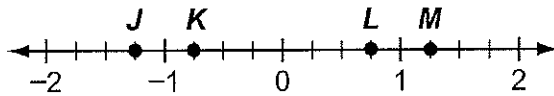
Ⓓ M

3 What is the least common denominator for $\frac{7}{12}$, $\frac{5}{8}$, and $\frac{1}{6}$?

Ⓐ 2

Ⓒ 24

Ⓑ 12

Ⓓ 48

4 Place an X in the table to show whether each inequality is true or false.

	True	False
$-1.8 > -\frac{1}{8}$		
$-\frac{9}{5} < -0.95$		
$|-2.4| < \frac{2}{4}$		

5 The table below shows the temperatures of four liquids a scientist is working with in his lab.

Temperature of Liquids

Liquid	Temperature (°C)
A	−2.7
B	1.9
C	−15
D	$18\frac{1}{2}$

If the freezing point of these liquids is 0°C, which liquid has a temperature that is the closest to freezing?
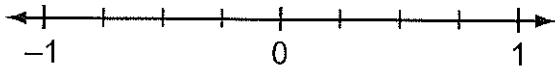
Ⓐ A

Ⓒ C

Ⓑ B

Ⓓ D

6 Darrel has 36 daisies and 54 roses. He wants to put an equal number of daisies and roses into vases. What is the GREATEST number of daisies and roses Darrel can put in each vase?

Ⓐ 6

Ⓒ 12

Ⓑ 9

Ⓓ 18

7 Write the numbers in the correct order from LEAST to GREATEST.

−32	$31\frac{5}{9}$	−31.7	31.75	$-32\frac{1}{4}$

Name _____

8 Plot 0.75 and $-\frac{1}{2}$ and their opposites on the number line below.

$$\begin{array}{ccc} -1 & 0 & 1 \end{array}$$

9 Mr. Martinez is buying food for a party. Hamburger patties are sold in packages of 6, and hamburger buns are sold in packages of 8. If he wants to have an equal number of each, what is the LEAST number of hamburger patties and buns that Mr. Martinez will have to buy?

10 The table below shows today's change in points for four different stocks.

Today's Change in Stock Points

Stock	Change in Points
A	0.14
B	−10.33
C	−9.82
D	4.5

Write the point values in the correct order from GREATEST to LEAST.

11 During a football game, the Tigers gained $3\frac{4}{5}$ yards on the first play and lost 3.7 yards on the second play.

Write an inequality to compare the change in yards during the first two plays of the Tigers' football game.

12 A shirt that Ashley wants to buy is no longer on sale. The change in price of the shirt is $2.25.

Part A

Plot the change in price of the shirt and its opposite on the number line.

$$\begin{array}{ccccccc} -3 & -2 & -1 & 0 & 1 & 2 & 3 \end{array}$$
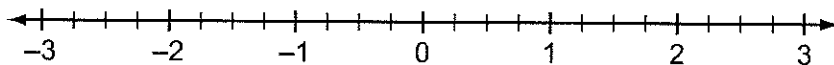
Part B

Which statement about the points plotted on the number line is true?

(A) Both points are on the same side of 0.

(B) The absolute value of both points is 0.

(C) Both points have an absolute value of 2.25.

(D) The distance of both points from each other is 2.25.

1 Which expression is equivalent to $\frac{3}{4} \div \frac{5}{7}$?

Ⓐ $\frac{3}{4} \times \frac{7}{5}$ Ⓒ $\frac{4}{3} \times \frac{7}{5}$

Ⓑ $\frac{3}{4} \times \frac{5}{7}$ Ⓓ $\frac{4}{3} \times \frac{5}{7}$

2 Mr. Benson has a board that is $\frac{7}{8}$ foot long. He cuts the board into pieces that are $\frac{1}{16}$ foot long. Which expression can be used to find the number of pieces that Mr. Benson gets from cutting the board?

Ⓐ $\frac{7}{8} - \frac{1}{16}$ Ⓒ $\frac{7}{8} + \frac{1}{16}$

Ⓑ $\frac{7}{8} \div \frac{1}{16}$ Ⓓ $\frac{7}{8} \times \frac{1}{16}$

3 On Saturday, Kiana studied $2\frac{1}{4}$ hours for her college exams. She spent $\frac{3}{4}$ hour studying for each of her exams. How many exams did Kiana study for?

Ⓐ $1\frac{1}{2}$ Ⓒ $2\frac{2}{3}$

Ⓑ 2   Ⓓ 3

4 What is the missing factor in the equation $3\frac{1}{2} \times \boxed{} = \frac{1}{2}$?

Ⓐ $\frac{1}{7}$ Ⓒ $3\frac{1}{4}$

Ⓑ $1\frac{3}{4}$ Ⓓ $\frac{7}{1}$

5 Sammy buys $15\frac{1}{2}$ yards of fabric to make shirts for his friends. He needs $2\frac{5}{6}$ yards of fabric to make each shirt. How many shirts can Sammy make?

Ⓐ 3   Ⓒ 5

Ⓑ 4   Ⓓ 6

6 Place an X in the table to show whether each equation is true or false.

	True	False
$3\frac{2}{3} \div \frac{1}{6} = \frac{11}{3} \times \frac{6}{1}$		
$5 \div 2\frac{1}{4} = \frac{5}{1} \times \frac{9}{4}$		
$4\frac{1}{5} \div 2\frac{1}{8} = \frac{20}{5} \times \frac{8}{16}$		

Divide.

7 $\frac{5}{11} \div \frac{4}{11} =$ _____

8 $\frac{5}{9} \div 1\frac{2}{3} =$ _____

9 $29 \div \frac{6}{7} =$ _____

10 $5\frac{3}{5} \div 3\frac{1}{2} =$ _____

Name _____

11 After a class pizza party, there are $1\frac{1}{4}$ sausage pizzas and $\frac{5}{6}$ of a cheese pizza left over. If one slice of pizza is $\frac{1}{12}$ of a pizza, what is true about the number of slices of pizza left over?

There are _____ slices of sausage pizza left over.

There are _____ more pieces of sausage pizza left over than pieces of cheese pizza.

12 It took Ms. Hernandez $\frac{4}{5}$ hour to drive $\frac{3}{10}$ of the way to her uncle's house. How many hours did it take her to drive to her uncle's house?

13 A farmer plants $7\frac{1}{4}$ acres of green apples in his orchard. This makes up $\frac{3}{8}$ of his entire orchard. How many acres make up the farmer's orchard?

14 Lucas mixed together $4\frac{1}{2}$ quarts of iced tea and $2\frac{1}{4}$ quarts of lemonade to make punch for a party. He filled glasses with $\frac{3}{8}$ quart of punch. How many glasses of punch did Lucas serve at his party?

15 Angela has $21\frac{3}{8}$ cups of flour. She uses $2\frac{1}{4}$ cups of flour to make each batch of cookies.

Part A

How many batches of cookies can Angela make?

Part B

Write an equation to model the solution.

1 Rolando bought 9 grapefruit. Each grapefruit had a mass of 0.397 kilogram. Which expression can be used to find the total mass of the grapefruit that Rolando bought?

Ⓐ $9 \div 0.397$ Ⓒ $9 - 0.397$

Ⓑ 9×0.397 Ⓓ $9 + 0.397$

2 A scientist used 5.6 liters of water and 4.92 liters of vinegar to perform a science experiment. How much more water than vinegar did the scientist use?

Ⓐ 0.68 liter   Ⓒ 1.32 liters

Ⓑ 0.72 liter   Ⓓ 1.94 liters

3 A truck is loaded with 42,008 pounds of crates. If each crate weighs 472 pounds, how many crates are loaded onto the truck?

Ⓐ 84   Ⓒ 89

Ⓑ 88   Ⓓ 99

4 Last week Sanjay ran 20.5 miles less than Rachel. If Sanjay ran 15.64 miles, how far did Rachel run?

Ⓐ 4.86 miles   Ⓒ 35.69 miles

Ⓑ 15.14 miles   Ⓓ 36.14 miles

5 Violet's father gives her $20 to go to a basketball game with her friend. She buys a bottle of water for $2.75 and a ticket to the game, which costs her 6 times as much as the bottle of water. Does Violet have enough money left over to buy her friend a bottle of water?

Ⓐ Yes, she has $8.50 left over.

Ⓑ Yes, she has $3.50 left over.

Ⓒ No, she only has $1.75 left over.

Ⓓ No, she only has $0.75 left over.

Solve.

6 $37.19 + 622.8 =$ _____

7 $54.06 - 19.312 =$ _____

8 $8.92 \times 7.4 =$ _____

9 $6.084 \div 0.65 =$ _____

Name _____

10 A cheetah can run at a speed of 74.56 miles per hour. A racehorse can run at a speed of 38.9 miles per hour. How much faster can a cheetah run than a racehorse in miles per hour?

_____

11 A new library has 2,300 books to put on the shelves. Each shelf holds 57 books. How many shelves will be completely full of books?

_____

12 Karen's garden measures 4.8 feet wide and 19.32 feet long. What is the area of her garden in square feet?

_____

13 A group of friends went to the movies together. They paid a total of $49.50 for the movie tickets and $32.40 for snacks to share. If each person paid $13.65, how many people were in the group?

_____

14 Olivia, Tristan, and Malcolm are rock climbing. The table below shows their current elevations.

Rock Climbers' Current Elevations

Climber	Elevation (meters)
Olivia	11.8
Tristan	7.45
Malcolm	20.6

Part A

Olivia climbs 9.75 meters higher than her current elevation. What is her new elevation in meters?

_____

Part B

The climbing coach is located 3.8 times as high as Tristan. What is the coach's elevation in meters?

_____

15 The average size of a dairy farm is 175.84 acres. This is 1.4 times the size of Mr. Maldova's farm.

Part A

How many acres is Mr. Maldova's farm?

_____

Part B

Write an equation to model the solution to the problem.

_____

1 Michelle bought 4 gallons of grape juice and 5 gallons of apple juice for a party. What is the ratio of gallons of apple juice to gallons of grape juice she bought?

Ⓐ $\frac{4}{9}$

Ⓒ $\frac{5}{9}$

Ⓑ $\frac{4}{5}$

Ⓓ $\frac{5}{4}$

2 The table shows the number of boys and girls who signed up for certain summer classes.

Summer Classes

Class	Boys	Girls
art	12	4
dance	5	15
music	10	5
poetry	3	9

Which two classes have the same ratio of boys to girls?

Ⓐ art and poetry

Ⓑ dance and music

Ⓒ music and art

Ⓓ poetry and dance

3 A landscaper plants 18 bushes in a 36-foot section of land along the side of a house. How many bushes does the landscaper plant in a 10-foot section of land?

Ⓐ 5

Ⓒ 12

Ⓑ 8

Ⓓ 20

4 There are 3 green marbles and 15 blue marbles in a bag. What is the ratio of green marbles to total number of marbles?
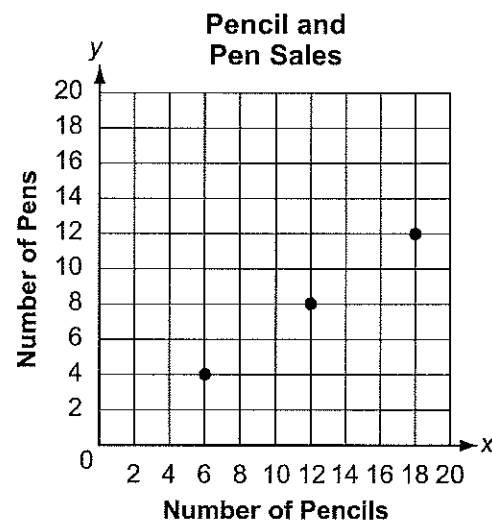
Select **all** the equivalent ratios that represent this relationship.

Ⓐ 3:15

Ⓓ 1:5

Ⓑ 1:6

Ⓔ 3:18

Ⓒ 2:12

Ⓕ 2:10

5 Deron recorded his heart rate as 204 beats in 3 minutes. What is the unit rate in beats per minute?

Ⓐ 67

Ⓒ 69

Ⓑ 68

Ⓓ 70

6 The graph shows the ratio of pencils to pens sold at the school bookstore.

Pencil and Pen Sales

If the bookstore sells 15 pencils, what is the ratio of pencils to pens sold written as a fraction?

Name _____

7 The ratio of wins to losses is equivalent for four basketball teams. Complete the table to show how many wins and losses each team has.

Basketball Teams' Records

Team	Wins	Losses
Tigers	20	
Vikings	25	10
Cougars		12
Pirates	35	

8 Samara runs 4 miles in 38 minutes. If she continues running at the same pace, how many minutes will it take her to run 12 miles?

9 Mr. Blanco used 15.75 yards of fabric to make 7 costumes for the school play. How many yards of fabric did he use per costume?

10 Cherries are on sale for $16 for 4 pounds. Jordyn pays $27.20 for cherries to make a cobbler. How many pounds of cherries does she buy?

11 A reading teacher bought sets of different numbers of books for his class. He paid the same price for each book.
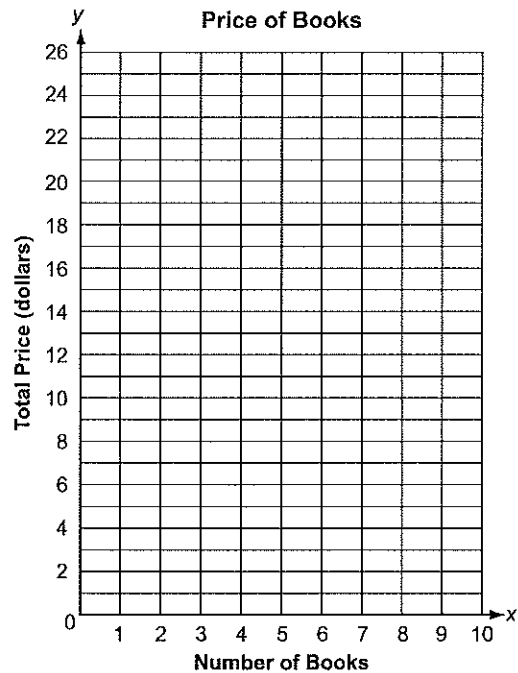
Part A

Complete the table to show the number of books he bought or the price he paid.

Price of Books

Number of Books	4	6		10
Total Price	$10		$20	

Part B

Graph the 4 points from the table to show the total cost of the different number of books the teacher bought.

Part C

How much did the teacher pay per book?