



Contingency Packet

Subject: Mathematics

State: New York

Student Name: _____

Teacher Name: _____

School Name: _____

1 The taxi fare in Gotham City is \$2.40 for the first $\frac{1}{2}$ mile and additional mileage charged at the rate \$0.20 for each additional 0.1 mile. You plan to give the driver a \$2 tip. How many miles can you ride for \$10?

(A) 2.8 miles

(B) 3.3 miles

(C) 4.0 miles

(D) 4.5 miles

2 The entry fee to the fair is \$4.00. Each ride requires a ticket that costs \$0.50. Heidi spent a total of \$12.00. How many tickets did she buy?

(A) 6 tickets

(B) 16 tickets

(C) 24 tickets

(D) 32 tickets

3 Frank threw a party with his friends. The cost of refreshments and the amounts purchased for the party are shown in the table below.

Refreshment	Cost	Amount purchased for party
Soda	\$1.25 per liter	10 liters of soda
Pizza	\$14.50 each	5 pizzas
Cake	\$12.00 each	1 cake

20 people split the total cost equally. What was the cost of the refreshments **per person**?

- (A) \$4.85
- (B) \$27.75
- (C) \$63.75
- (D) \$97.00

4 Lora read $\frac{1}{8}$ of a comic book in 2 days. She reads the same number of pages every day. What part of the book does she read in a week?

(A) $\frac{1}{28}$

(B) $\frac{1}{16}$

(C) $\frac{7}{16}$

(D) $\frac{7}{8}$

5 Sally skates $\frac{1}{4}$ mile in $\frac{1}{2}$ hour. At what speed does Sally skate?

(A) $\frac{1}{8}$ miles per hour

(B) $\frac{1}{2}$ mile per hour

(C) 2 miles per hour

(D) 8 miles per hour

6 Helen made a graph that represents the amount of money she earns, y , for the number of hours she works, x . The graph is a straight line that passes through the origin and the point (1, 12.5).

Which statement **must** be true?

(A) The slope of the graph is 1.

(B) Helen earns \$12.50 per hour.

(C) Helen works 12.5 hours per day.

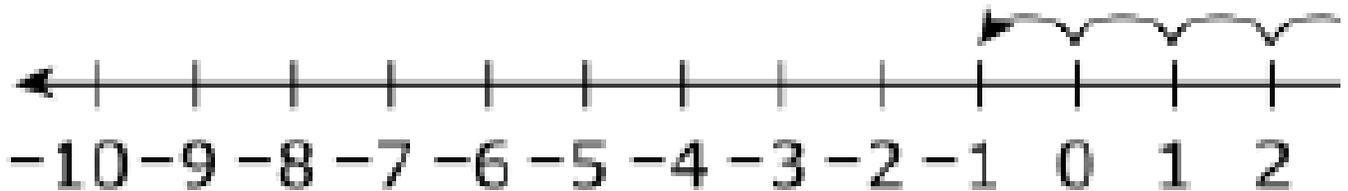
(D) The y -intercept of the graph is 12.5.

7 A meteorologist was monitoring the temperature outside in degrees Fahrenheit ($^{\circ}\text{F}$) and wrote the expression $78 + (-6) - 5$. Which statement best describes this expression?

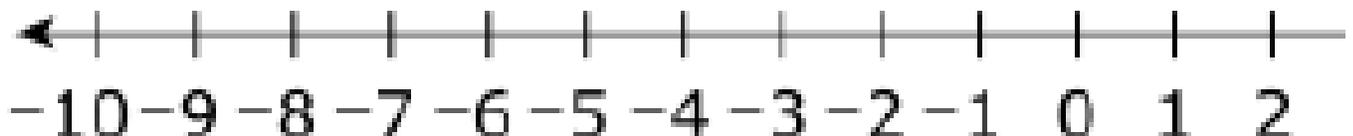
- (A) The temperature started at 78°F and increased by 6°F . Then the temperature decreased by 5°F .
- (B) The temperature started at 78°F and increased by 6°F . Then the temperature increased by 5°F .
- (C) The temperature started at 78°F and decreased by 6°F . Then the temperature decreased by 5°F .
- (D) The temperature started at 78°F and decreased by 6°F . Then the temperature increased by 5°F .

8 Which number line demonstrates how to find the sum of 3 and -4 ?

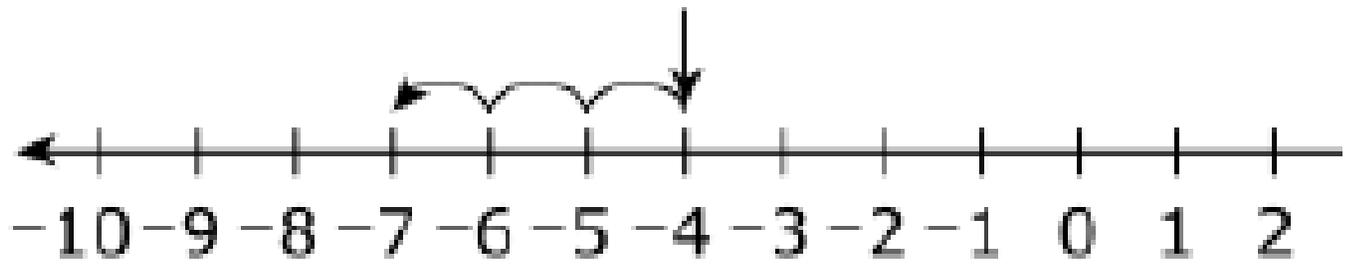
(A)



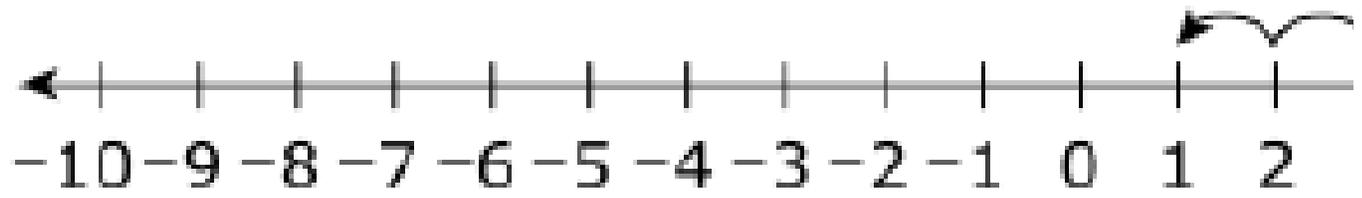
(B)



(C)



(D)



9 Which of the following is equivalent to the expression below?

$$(-3m + 5) + (m - 11)$$

(A) $4m - 16$

(B) $-4m - 6$

(C) $2m - 16$

(D) $-2m - 6$

10 Which expression represents a simplified form of the algebraic expression shown below?

$$\frac{1}{2}(2x + 4) + x$$

(A) $x + 2$

(B) $2x + 4$

(C) $2x + 2$

(D) $3x + 2$

11 An earthquake wave travels through 55 km of rock in 25 seconds.

Which equation represents the relationship between t , the number of seconds, and d , the total distance the wave travels?

(A) $d = \frac{5}{11}t$

(B) $d = 1\frac{4}{7}t$

(C) $d = 2.2t$

(D) $d = 80t$

12 A package of 12 pencils costs \$2.04. Based on the cost of this package, what is the cost of 1 pencil?

(A) \$0.06

(B) \$0.17

(C) \$0.24

(D) \$0.59

13 Select **all** tables that represent a proportional relationship between x and y .

(A)

x	0	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{5}$
y	0	$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$

(B)

x	0	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$
y	0	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$

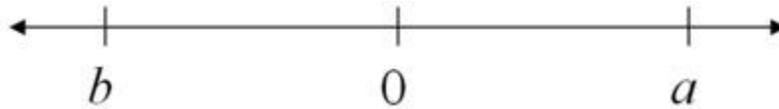
(C)

x	0	1	3	5
y	0	1	9	25

(D)

x	0	1	3	4
y	0	5	15	20

- 14 On the number line below, the numbers a and b are the same distance from 0. What is $a + b$?



- (A) $2a$
- (B) $2b$
- (C) 0
- (D) The answer cannot be found from the information given.
- 15 Which statement **best** describes a situation in which opposite quantities combine to make zero?
- (A) Shawna made 8 cups of soup and divided the soup into 8 containers.
- (B) Melanie deposited \$10 in her savings account and then withdrew \$10 from the account.
- (C) Peter scored 2 goals in the first period of a hockey game and 2 goals in the second period.
- (D) Marcos missed 4 questions on a test in which each question was worth 4 points.

16 What is the value of the expression below?

$$\frac{3}{4} \div 12$$

(A) $\frac{1}{16}$

(B) $\frac{1}{9}$

(C) 9

(D) 16

17 What is the value of the expression below?

$$-\frac{2}{3} \cdot \frac{5}{-6}$$

(A) $-\frac{4}{5}$

(B) $-\frac{5}{9}$

(C) $\frac{5}{9}$

(D) $\frac{4}{5}$

18 Which of the following numbers has a value that is between 10% and $\frac{1}{9}$?

(A) 0.151

(B) 0.112

(C) 0.108

(D) 0.019

19 Which of the following expressions has a value of 1.25?

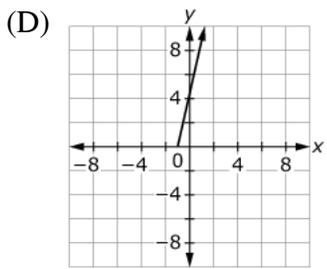
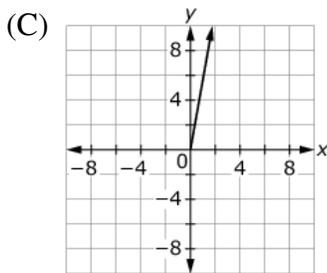
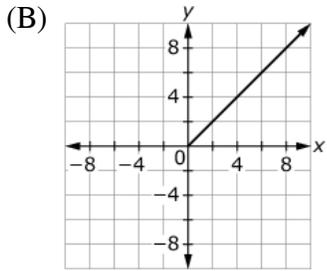
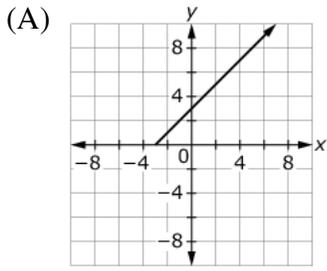
(A) $(2.5)(-0.5)$

(B) $-(2.5)(0.5)$

(C) $(-2.5)(-0.5)$

(D) $-(-2.5)(-0.5)$

20 Select **all** the graphs that show a proportional relationship between x and y .



21 Which table shows a proportional relationship between x and y ?

(A)

x	y
1	0
2	3
3	6

(B)

x	y
1	1
2	3
3	5

(C)

x	y
1	2
2	4
3	6

(D)

x	y
1	3
2	5
3	7

22 The table shows a proportional relationship between the number of pounds of grapes purchased and the total cost of the grapes.

Grapes

Number of Pounds	Total Cost (dollars)
4	2.76
7	4.83
9	6.21

A row of values is missing in the table.

Which number of pounds of grapes and total cost of the grapes could be used as the missing values in the table?

Select **each** correct response.

(A) Pounds of grapes: 2

Total cost: \$1.38

(B) Pounds of grapes: 3

Total cost: \$2.53

(C) Pounds of grapes: 6

Total cost: \$3.68

(D) Pounds of grapes: 8

Total cost: \$5.52

(E) Pounds of grapes: 11

Total cost: \$8.97

23 The table shows the number of pages a student reads and how many minutes it takes the student to read those pages.

Number of Pages Read

Number of Pages	Number of Minutes
4	9.0
6	13.5
8	18.0

Which statement best describes the relationship in the table?

- (A) The number of minutes is proportional to the number of pages, with a unit rate of 1.5 minutes per page.
- (B) The number of minutes is proportional to the number of pages, with a unit rate of 2.25 minutes per page.
- (C) The number of minutes is proportional to the number of pages, with a unit rate of 4.5 minutes per page.
- (D) The relationship in the table is not proportional.

24 Ocean water freezes at about $-2\frac{1}{2}^{\circ}\text{C}$. Fresh water freezes at 0°C . Antifreeze, a liquid used to cool most car engines, freezes at -64°C .

Imagine that the temperature is exactly at the freezing point for ocean water. How many degrees must the temperature drop for antifreeze to turn to ice?

- (A) 61.5°C
- (B) 62.5°C
- (C) 64°C
- (D) 66.5°C

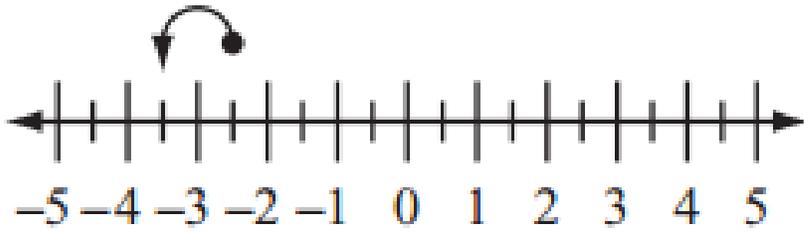
25 The average surface temperature on Jupiter is -162°F . The average surface temperature on Saturn is 46°F less than on Jupiter. What is the average surface temperature on Saturn?

- (A) -116°F
- (B) -126°F
- (C) -208°F
- (D) -218°F

26 Which of the following number lines models the expression below?

$$-2.5 + (-1)$$

(A)



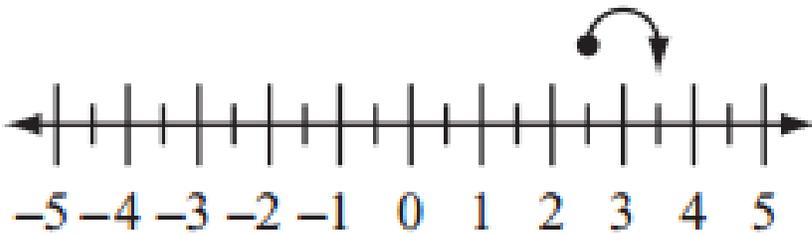
(B)



(C)



(D)



27 The temperature in a city increased from -12°F at dawn to 7°F in the afternoon. What was the change in temperature in degrees Fahrenheit?

28 What is the value of the expression below?

$$|-7| + |40|$$

(A) -47

(B) -33

(C) 33

(D) 47

29 What is the value of the expression below?

$$|12| + |-15|$$

(A) -27

(B) -3

(C) 3

(D) 27

30 Which of the following pairs of numbers are additive inverses of each other?

(A) -0.5 and -0.5

(B) -0.5 and 2

(C) 0.5 and -0.5

(D) 0.5 and 2

31 Jane and Eric are helping their teacher buy supplies for a research project. Every student will get a bag with 2 pencils and 30 index cards.

The teacher gave Jane \$17 to buy pencils from the school store. The pencils come in boxes of 12 and cost \$1.69 per box.

Eric was given \$19 to buy index cards at an office supply store. Index cards are sold in packs of 150 cards and cost \$2.99 per pack.

Each bag contains two pencils and 30 index cards. How much will each bag cost? Give your answer to the nearest cent. Show or explain how you found your answer.

32 An airplane's altitude changed -378 feet over 7 minutes. What was the mean change of altitude in feet per minute?

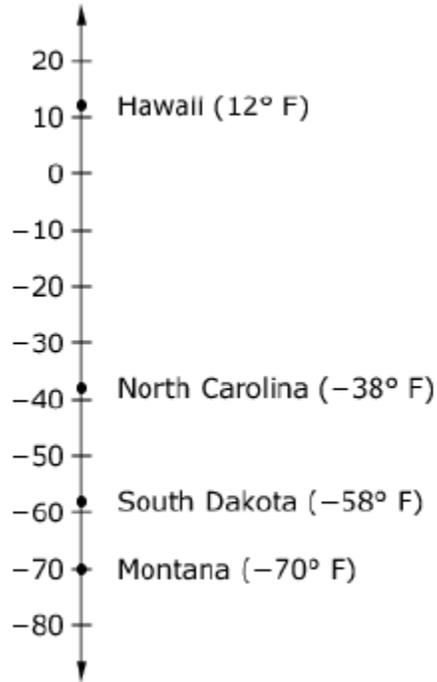
33 Coffee costs \$18.96 for 3 pounds.

(a) What is the cost per pound of coffee?

(b) Let x be the number of pounds of coffee and y be the total cost of x pounds. Draw a graph of the proportional relationship between the number of pounds of coffee and the total cost. If you can, use technology to do this.

(c) Where can you see the cost per pound of coffee in the graph? What is it?

34 The number line shows record low temperatures for four states.



Write the difference, in degrees, between the record low temperatures in Hawaii and South Dakota.

35 Robert recorded the temperature outside his house in the table shown.

Time	Temperature ($^{\circ}\text{F}$)
4:00 p.m.	15
6:00 a.m.	-7

Robert claims the difference between the temperatures is 8 degrees.

- (a) Explain why Robert's claim is incorrect.
- (b) What is the correct difference in temperatures?