8th Grade Summer Packet

Question 1.

Which of the following equations is an example of the distributive property?

A. $r(s + t) = rs + rt$

B. $a(bc) = (ab)c$

C. $x + (y + z) = (x + y) + z$

D. $b(c + d) = b(d + c)$

Question 2.

Which expression is equivalent to $3(4x + 10 \div 2 + 3)$?

A. $12x + 2$

B. $12x + 6$

C. $12x + 8$

D. $12x + 24$

Question 3.

Which is a simplified version of the following expression?

$$3y - \left[2y + 6\left(-2y + 4\right)\right]$$

A. $-13y + 24$

B. $-11y + 24$

C. $13y - 24$

D. $13y + 24$

Question 4.

A store is offering a 25% discount on all electronics during a special weekend sale. Marcia wants to buy a television that regularly costs p dollars. She has written the expression 0.75p to represent the sale price. Which is the best description for her expression?

A. She subtracted 0.25 from p.

B. She divided p by 0.25 then added that to p.

C. She multiplied p by 25 then subtracted p.

D. She multiplied p by 0.25 then subtracted that from p.

Question 5.

Keith bought 6 items at the grocery store. The lowest priced item was $0.90 and the highest priced item was $1.50. What is a reasonable amount that Keith spent at the grocery store?

A. between $1.00 and $3.00

B. between $3.00 and $6.00

C. between $6.00 and $9.00

D. between $9.00 and $12.00

Question 6.

Evan's soccer team played a total of 19 games during the fall season. Evan scored in about $\frac{1}{4}$ of the games. Which number is closest to the number of games in which Evan scored a goal?

A. 1

B. 5

C. 10

D. 15

Question 7.

Daniel is paid $10 per week for selling newspaper subscriptions. He is also paid $3.50 for each new customer (x) that signs up for the subscription. Which equation represents the amount (y) Daniel earns per week?

A. $y = 3.5x$

B. $y = 10 + x$

C. $y = 10 + 35x$

D. $y = 10 + 3.5x$

Question 8.

Mariska had 89 maps to give visitors at a state park on Saturday. At the end of the day, she had 12 maps left. Which equation could be used to find n, the number of maps she gave to visitors?

A. $n + 89 = 12$

B. $89 - n = 12$

C. $12n = 89$

D. $12 \div n = 89$

Question 9.

Doug had a total of $75 to buy 3 pictures for his room. He paid the same amount for each picture and had $27 left over. The equation below can be used to find how much money, m, Doug paid for each picture.

$$75 - (3 \times m) = 27$$

How much money did Doug pay for each picture?

A. $45

B. $34

C. $16

D. $9

Question 10.

What could be the value of x in the number sentence?

$6 + x < 10$

A. 3

B. 5

C. 8

D. 10

Question 11.

Krystal needs at least $130 to go on a trip. Her father has given her $45. Which inequality could be used to determine e, the remaining amount of money Krystal still needs for the trip?

A. $130 + 45 = e$

B. $130 - 45 > e$

C. $45 + e \leq 130$

D. $45 + e \geq 130$

Question 12.

Sandy sold 22 tickets to the school barbeque. She sold more than twice the number of tickets that Teresa sold. Let t represent the number of tickets Teresa sold. Which inequality could be used to find the value of t?

A. $2t \leq 22$

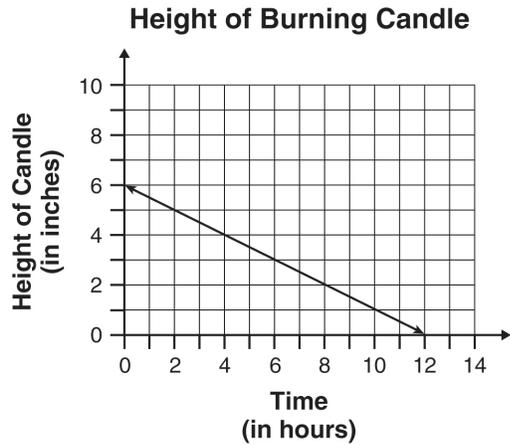B. $2t \geq 22$

C. $2t < 22$

D. $2t > 22$

Question 13.

An auditorium has 400 seats. Each row in the auditorium has 16 seats. In which equation does r represent the number of rows of seats in the auditorium?

A. $16r = 400$

B. $\frac{r}{16} = 400$

C. $r + 16 = 400$

D. $r - 16 = 400$

Question 14.

Simeon recorded the height of a burning candle over time.

Height of Burning Candle

Which statement is true about the burning candle's heights?

A. The candle loses 1 inch in height every hour.

B. The candle burns out completely in 6 hours.

C. The candle starts out at 10 inches in height.

D. The candle loses 1 inch in height every 2 hours.

Question 15.

The graph below shows the prices at which Joanna sells tomatoes according to their weight.

Tomato Prices
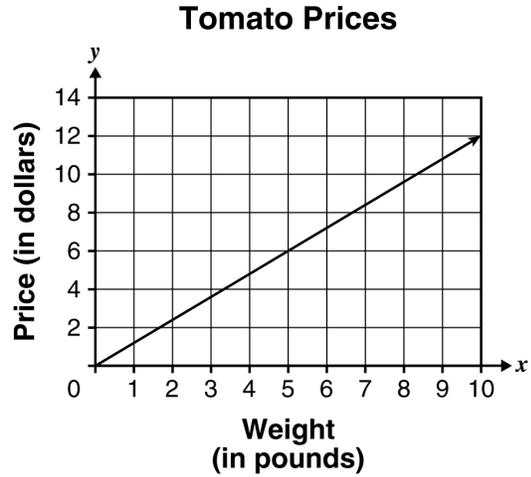
Which rate shows the price at which Joanna sells tomatoes?

A. $0.83 per pound

B. $1.20 per pound

C. $1.50 per pound

D. $2.50 per pound

Question 16.

In Rhonda's city, the outdoor temperature dropped 36 degrees in 4 hours. She used the ratio $\frac{-36}{4}$ to represent the temperature rate of change per hour. Which expression represents the same ratio?
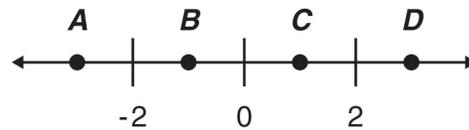
A. $\frac{36}{4}$

B. $-\left(\frac{36}{4}\right)$

C. $\frac{4}{36}$

D. $-\left(\frac{4}{36}\right)$

Question 17.

Mr. Mendez gave this problem to his class.
Find 2 numbers whose sum is positive and whose product is negative.
Points A, B, C, and D are shown on the number line.

The coordinates of which pair of points will solve Mr. Mendez's problem?

A. A and B

B. A and C

C. D and B

D. D and C

Question 18.

Which statement about the product of a whole number and its additive inverse is true?

A. The product will be 1.

B. The product will be 0.

C. The product will be negative.

D. The product will be greater than the whole number.

Question 19.

Which situation can be represented by $\frac{-48}{3}$?

A. Georgia missed 48 points on her science tests.

B. Tina withdrew $48 from her savings account 3 times this month.

C. Jose's team lost a football game by 12 points 3 times this season.

D. Franklin withdrew $48 from his savings account in 3 equal withdrawals.

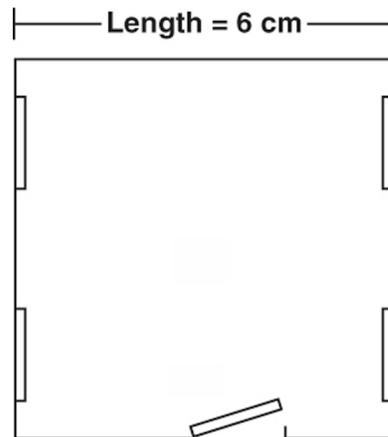## Question 20.

Which expression is equivalent to $-3(x - y)$?

A. $-3x - 3y$
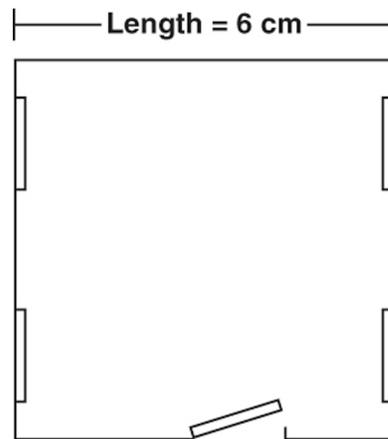
B. $-3x + 3y$

C. $-3x - y$

D. $-3x + y$

Question 21.

The length of Terri's living room is 18 feet. Which of the following illustrations shows Terri's living room drawn correctly to scale?

A.
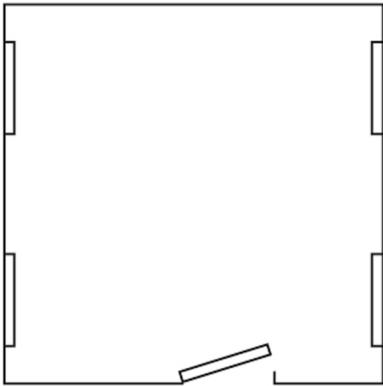**Terri's Living Room**

Length = 6 cm

Key: 1 cm = 3 feet

B.
Terri's Living Room

Length = 6 cm

Key: 3 cm = 6 feet

C.
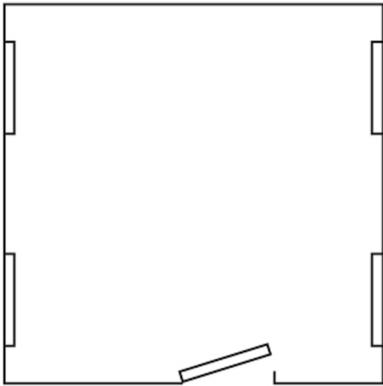
Terri's Living Room

├── Length = 6 cm ──┤

Key: 1 ft = 3 cm

D. ## Terri's Living Room

├── Length = 6 cm ──┤
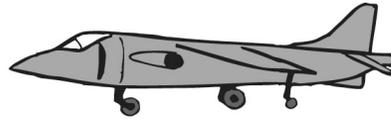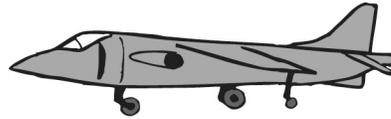
Key: 3 ft = 6 cm

A jet has a length of 242 feet. Which picture shows a model of the jet built to a scale of 1 inch = 22 feet?
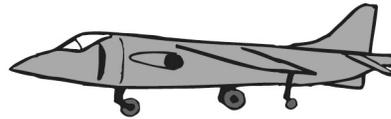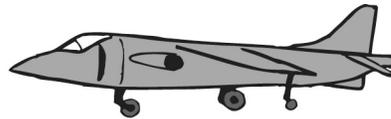
A.

11 inches

B.

10 inches

C.

12 inches

D.

13 inches

Question 23.

The book Janesa chose to read for her book report is 385 pages long. If she plans to read about 20 pages each day, which is closest to the number of days it will take Janesa to finish the book?

A. 20

B. 39

C. 200

D. 380

Question 24.

Leon drew two fraction game cards that were between $\frac{1}{6}$ and $\frac{1}{2}$. The sum of the two cards chosen lies within what range?

A. between 0 and $\frac{1}{6}$

B. between $\frac{1}{6}$ and $\frac{1}{4}$

C. between $\frac{1}{4}$ and $\frac{1}{3}$

D. between $\frac{1}{3}$ and 1

Question 25.

Which is the best estimate for $\frac{5}{6} + \frac{11}{12} + \frac{8}{7}$?

A. 1

B. 2

C. 3

D. 4