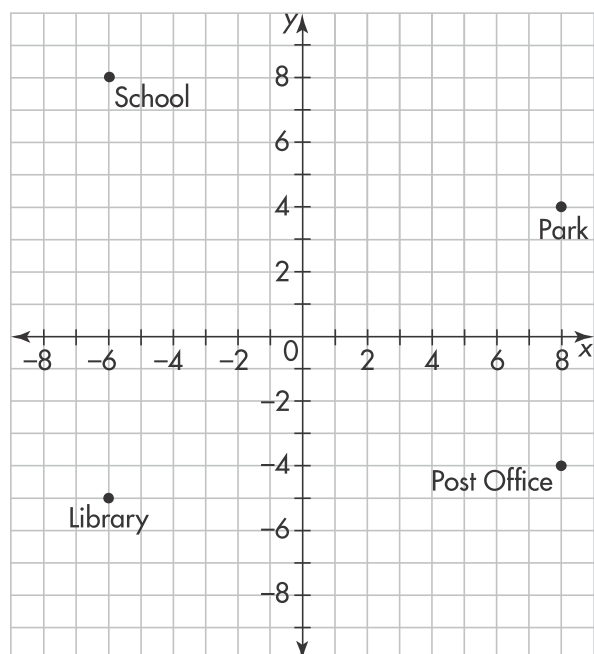


Expressions, Equations, and Functions

Read each question. Then mark your answer on the sheet.

Use the graph for Exercises 1–6.



1 unit = 1 block

1. Which ordered pair names the location of the library?

A $(-6, -5)$
B $(6, -5)$
C $(-5, -6)$
D $(-6, -6)$

2. Which is the distance from the park to the post office?

A 6 blocks
B 7 blocks
C 8 blocks
D 9 blocks

3. Which of these is equal to the number of blocks from the school to the library? Choose all that apply.

A $|8| + |-5|$
B $8 + -5$
C $8 + 5$
D $-|8| + |-5|$

4. Which two places are the same distance from $(0, 0)$?

A The library and the post office
B The park and the post office
C The park and the library
D The school and the post office

5. If the bank is located at $(-4, 5)$, which quadrant is it in?

A Quadrant I
B Quadrant II
C Quadrant III
D Quadrant IV

6. If the point $(2, 4)$ is reflected across the x-axis, what are the coordinates of the reflected point?

A $(-2, 4)$
B $(2, 4)$
C $(-2, -4)$
D $(2, -4)$

Name _____

Expressions, Equations, and Functions

(continued)

Read each question. Then mark your answer on the sheet.

7. Evaluate $6 + 3 \times 2^2 + 2$.

- A** 15 **C** 38
B 20 **D** 44

8. Evaluate the expression $5x + 25$ for $x = 3$.

- A** 30 **C** 50
B 40 **D** 78

9. Evaluate the expression $15t - 3$ for $t = 2$.

- A** 12 **C** 33
B 27 **D** 149

10. Sasha is 12 years old. Her sister, Emma, is y years younger than Sasha. Which expression could be used to find Emma's age, in years?

- A** $12 + y$ **C** $y - 12$
B $12 - y$ **D** $y + 12$

11. Which expressions are equivalent to $2(8 + 6)$? Choose all that apply.

- A** $2(8) + 2(6)$
B $2(14)$
C $16 + 12$
D 22

12. Which expressions are equivalent? Choose all that apply.

- A** $4(3x + y)$ and $12x + y$
B $16x + 8y$ and $8(2x + y)$
C $3(x + 2y)$ and $3x + 2y$
D $12x + 4y$ and $4(3x + y)$

13. Which expressions are equivalent to $2(4x + 3y)$? Choose all that apply.

- A** $8x + 6y$
B $8x + 3y$
C $4x + 4x + 3y + 3y$
D $8x + 5y$

14. Video games are on sale this week for 25% off the regular price. If y represents the regular price before discount, which expression could be used to calculate the sale price of a video game?

- A** $y - 0.25$ **C** $y - 25y$
B $y - 0.25y$ **D** $y - 25$

15. Which statements are true for $x = 2$? Choose all that apply.

- A** $2x + 3 < 8$
B $2x - 3 < 2$
C $5 + 3x > 12$
D $10 - 3x > 3$

Expressions, Equations, and Functions

(continued)

Read each question. Then mark your answer on the sheet.

- 16.** Water freezes at 32°F . Let t = the temperature of the water. Which of these could represent the temperature of water that is NOT frozen? Choose all that apply.

A $t > 32^{\circ}\text{F}$ **C** $t = 38^{\circ}\text{F}$
B $t = 32^{\circ}\text{F}$ **D** $t < 32^{\circ}\text{F}$

- 17.** Which symbol makes the statement true?

$$-(-7) \bigcirc 7$$

A $<$ **C** $=$
B $>$ **D** $+$

- 18.** Which submarine is closest to the surface?

Submarine	Depth
Yellow	-30 ft
Green	-60 ft
Blue	-50 ft
Red	-40 ft

A Yellow **C** Blue
B Green **D** Red

- 19.** Which statements are true? Choose all that apply.

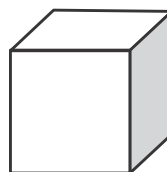
A $7^{\circ}\text{F} > 3^{\circ}\text{F}$
B $2^{\circ}\text{F} > -3^{\circ}\text{F}$
C $3^{\circ}\text{F} < -5^{\circ}\text{F}$
D $-5^{\circ}\text{F} > -7^{\circ}\text{F}$

- 20.** Use mental math to find the product.

$$2,500 \times 50 =$$

A 50 **C** 12,500
B 1,250 **D** 125,000

- 21.** The formula $V = s^3$, where s is a side length, can be used to find the volume of a cube. Use this formula to find the volume of a cube with $s = 3$ cm.



A 27 cm^3
B 21 cm^3
C 12 cm^3
D 9 cm^3

- 22.** The formula, $A = 6s^2$, where s is a side length, can be used to find the surface area of a cube. What is the surface area of a cube in which the length of each side, $s = 3$ cm?

A 54 cm^2
B 45 cm^2
C 27 cm^2
D 6 cm^2

Numbers and Operations

Read each question. Then mark your answer on the sheet.

- 23.** Campsite A is at an altitude of -25 ft. Campsite B is at an altitude of -42 ft. How much higher is Campsite A than Campsite B?

A 7 ft
B 12 ft
C 17 ft
D 67 ft

- 24.** Maurice shot 2 under par, or -2 , on each of the first 4 holes of golf. What is his score with respect to par after the fourth hole?

A 8 **C** -4
B 4 **D** -8

- 25.** Julian's checking account balance is $\$-23.56$. Which statements are true? Choose all that apply.

A Julian's debt is greater than $\$20$.
B Julian's debt is less than $\$30$.
C Julian has a negative balance in his account.
D Julian has enough money in his account to withdraw $\$10$.

- 26.** Which of the following statements are true? Choose all that apply.

A $|-10| + |-20| = 30$
B $|-30| = 30$
C $-|-30| = -30$
D $|-30| = -30$

- 27.** Tony needs to pack 12,960 bottles into cases of 24 bottles per case. How many cases will there be?

A 504 cases
B 530 cases
C 540 cases
D 640 cases

- 28.** Which expressions are equivalent to $7,200 \div 40$? Choose all that apply.

A $720 \div 4$
B 180
C 1,800
D $72,000 \div 400$

Name _____

Numbers and Operations

(continued)

Read each question. Then mark your answer on the sheet.

- 29.** Cecil has \$6,480. He wants to share it equally among his 10 grandchildren. How much can Cecil give each grandchild?

A \$64.80
B \$640.80
C \$648.00
D \$6,480.00

- 30.** $73 \overline{)61,324}$

A 840 R4
B 840 R40
C 841 R14
D 841 R40

- 31.** There are 322 boxes and each box holds 18 candles. How many candles can fit in the boxes?

A 5,696 candles
B 5,786 candles
C 5,796 candles
D 57,960 candles

- 32.** The students want to raise \$76,400 for a new stadium. How many \$20 donations will they need to collect to raise the money?

A 382 donations
B 3,810 donations
C 3,820 donations
D 1,528,000 donations

- 33.** There were 50,000 fans at the baseball game. If 7,500 of them received a free promotional cap, how many fans did NOT receive a free cap?

A 42,500
B 43,500
C 52,500
D 57,500

- 34.** What is the greatest common factor of 15 and 20?

A 3
B 4
C 5
D 9

Numbers and Operations

(continued)

Read each question. Then mark your answer on the sheet.

- 35.** Maria's parents do not have to work this Saturday. Her mom gets every sixth day off. Her dad gets every fourth day off. How long will it be until they both get a day off together again?

A 12 days **C** 84 days
B 24 days **D** 96 days

- 36.** The art teacher has 36 small sticks and 60 pipe cleaners for art projects. He wants to make kits for the students using all the sticks and pipe cleaners. All the kits must be alike. He wants to make as many kits as possible. What is the greatest number of kits he can make?

A 8 kits **C** 12 kits
B 9 kits **D** 36 kits

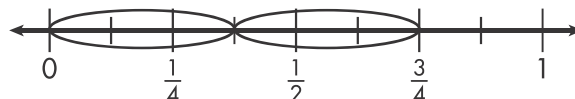
- 37.** Which has the same value as $\frac{6}{10} \div \frac{3}{5}$?

A $\frac{6}{10} \times \frac{5}{3}$ **C** $\frac{10}{6} \times \frac{2}{5}$
B $\frac{6}{10} \div \frac{5}{3}$ **D** $\frac{10}{6} \times \frac{5}{3}$

- 38.** A bread recipe calls for 5 cups of flour. If you add flour to the dough $\frac{1}{4}$ cup at a time, how many times will you add flour to the dough?

A $\frac{5}{4}$ **C** 15
B 10 **D** 20

- 39.** Two friends share $\frac{3}{4}$ of a granola bar equally. What fraction of the granola bar will each person get?



A $1\frac{1}{2}$ **C** $\frac{3}{8}$
B $\frac{1}{2}$ **D** $\frac{1}{4}$

- 40.** How much more will it cost Heather to buy 24 tulips rather than 24 marigolds?

Dave's Garden Center	
Tulips	\$0.33 each
Daisies	\$0.75 each
Roses	\$9.00 each
Marigolds	\$0.25 each

A \$7.92 **C** \$2.29
B \$6.00 **D** \$1.92

- 41.** What is $33.7 + 24.51$?

A 57.21 **C** 58.21
B 57.31 **D** 58.31

- 42.** Juan threw the shot put 52.35 feet. Sal threw the shot put 51.84 feet. How much farther did Juan throw the shot put than Sal?

A 0.41 feet **C** 1.51 feet
B 0.51 feet **D** 104.19 feet

Name _____

Numbers and Operations

(continued)

Read each question. Then mark your answer on the sheet.

- 43.** Mateo is 51.25 inches tall and Sam is 37.75 inches tall. How much taller is Mateo than Sam?

A 12.5 inches
B 13 inches
C 13.5 inches
D 89 inches

- 44.** What is 3.5×0.05 ?

A 0.0175
B 0.175
C 1.75
D 17.5

- 45.** The nurse has 21.6 ounces of medicine that must be divided equally into 24 syringes. How much medicine will be in each syringe?

A 2.4 ounces
B 9 ounces
C 0.9 ounces
D 0.09 ounces

- 46.** Lenny's fence is 6.9 meters long. He adds a new section that is 2.19 meters long. What is the total length of the fence?

A 8.09 meters
B 9.09 meters
C 9.19 meters
D 9.99 meters

- 47.** A container in a pharmacy holds 0.92 liter of a solution. Mrs. Dwyer used 0.5 of the container for a prescription. How much did she use?

A 0.046 liters
B 0.46 liters
C 4.6 liters
D 46 liters

- 48.** Forrest buys some apples. The total cost is \$3.20 and the cost of each apple is \$0.40. How many apples does Forrest buy?

A 7
B 8
C 9
D 10