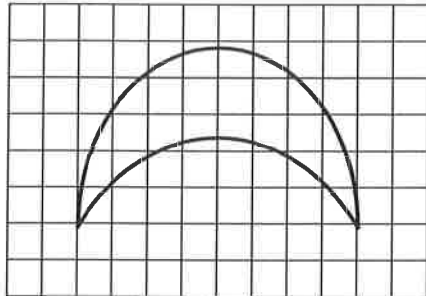


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**SIXTH GRADE MATHEMATICS**

*Use the shape below to answer question 1.*



1. Estimate the area of the figure shown above.
- A. 11 square units
  - B. 15 square units
  - C. 32 square units
  - D. 40 square units

*Use the table below to answer question 2.*

x	y
1	1
2	7
3	13
4	19
5	25

2. Which rule generates the quantities on the table above?
- A.  $y = 6x - 5$
  - B.  $y = 2 - 7x$
  - C.  $y = 4x - 19$
  - D.  $y = 6 - 5x$

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**SIXTH GRADE MATHEMATICS**

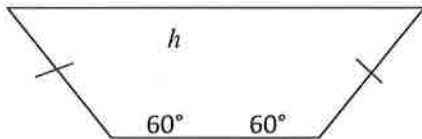
3. Teagan is taking a math test that has 36 problems. She has already completed 27 of them. What percent of the problems have already been completed?

- A. 27%
- B. 36%
- C. 63%
- D. 75%

4. What percent is equivalent to the fraction  $\frac{3}{8}$ ?

- A. 0.0375%
- B. 0.375%
- C. 3.75%
- D. 37.5%

Use the trapezoid to answer question 5.



5. Find the measure of the missing angle ( $h$ ) in the trapezoid.

- A.  $30^\circ$
- B.  $40^\circ$
- C.  $60^\circ$
- D.  $90^\circ$

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**SIXTH GRADE MATHEMATICS**

6. Order the numbers from least to greatest.

$$\frac{1}{5}, 0.5, 0.05, 0.23, \frac{1}{3}$$

A.  $\frac{1}{3}, \frac{1}{5}, 0.23, 0.05, 0.5$

B.  $0.05, \frac{1}{5}, 0.23, \frac{1}{3}, 0.5$

C.  $0.23, 0.5, 0.05, \frac{1}{5}, \frac{1}{3}$

D.  $\frac{1}{5}, \frac{1}{3}, 0.23, 0.05, 0.5$

7. What is an equivalent representation for  $9^2$ ?

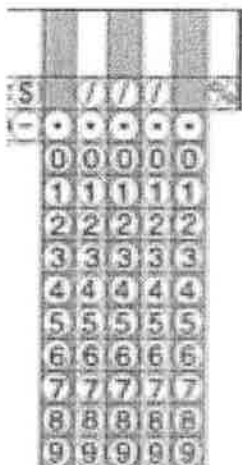
(no calculator)

- A.  $8^1$
- B.  $6^2$
- C.  $3^4$
- D.  $4^3$

# SIXTH GRADE MATHEMATICS

8. The cake recipe called for  $1\frac{3}{4}$  cups of flour. If Sue needs to double the recipe, how many cups of flour will be needed?

*Put the answer in the grid below.*



*Use the table below to answer question 9.*

Color	Frequency
Red	26
Yellow	40
Blue	18
Green	16

9. Paige has a jar that contains 4 blocks. She put her hand in the jar and pulled out a block 100 times and each time returned the block before selecting a new one. The results of the experiment are recorded on the table above. What is the probability of selecting a yellow block based on this experiment?

- A.  $\frac{1}{4}$
- B.  $\frac{2}{25}$
- C.  $\frac{2}{5}$
- D.  $\frac{4}{25}$

**SIXTH GRADE MATHEMATICS**

10. What is the prime factorization of 72?

- A.  $2 \times 4 \times 9$
- B.  $2^3 \times 9$
- C.  $2^2 \times 18$
- D.  $2^3 \times 3^2$

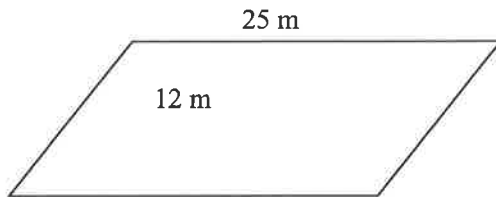
11. Jacob rolled a 6-sided number cube (die) 25 times. According to the data in the table, what is the probability of rolling a number 5?

Number on Side of Cube	Frequency of number rolled
1	4
2	7
3	3
4	5
5	3
6	3

- A.  $\frac{3}{5}$
- B.  $\frac{3}{25}$
- C.  $\frac{1}{6}$
- D.  $\frac{5}{25}$

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**SIXTH GRADE MATHEMATICS**

*Use the parallelogram to answer question 12.*



**12. What is the area of the parallelogram?**

- A. 300 meters squared
- B. 150 meters squared
- C. 74 meters squared
- D. 37 meters squared

**13. Carmen can walk around the track in 4 minutes. Mary can walk around the track in 6 minutes. After 60 minutes, what is the difference in the number of times Carmen and Mary have walked around the track?**

- A. 5
- B. 10
- C. 15
- D. 20

**14. What is the least common multiple when adding  $\frac{7}{15} + \frac{7}{10} + \frac{7}{12}$  ?**

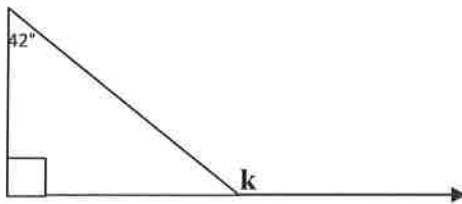
- A. 21
- B. 37
- C. 60
- D. 180

**SIXTH GRADE MATHEMATICS**

15. Sam has a bag with 6 blue, 4 yellow, 11 green and 3 red marbles. He takes one out of the bag and records the color and puts it back in the bag before taking another one out. He does this 24 times. If he records 6 red marbles, what is the experimental probability of selecting a red marble?

- A. 50%
- B. 33%
- C. 25%
- D. 12.5%

Use the diagram to answer question 16.



16. What is the measure of angle k?

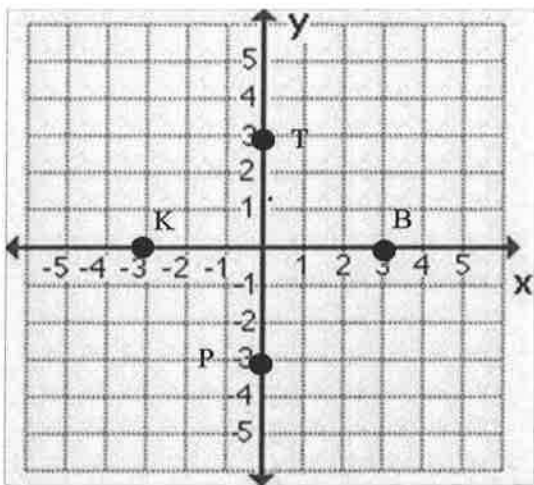
- A.  $42^\circ$
- B.  $90^\circ$
- C.  $138^\circ$
- D.  $132^\circ$

**SIXTH GRADE MATHEMATICS**

17. Carlos took a taxi to the airport. The company uses the equation  $y = 3.25 + .75x$  where  $y$  represents the total cost and  $x$  represents the number of miles he rode in the cab. How many miles did Carlos travel if he paid \$14.50?

- A. 14 miles
- B. 15 miles
- C. 32 miles
- D. 75 miles

Use the coordinate grid below to answer question 18.



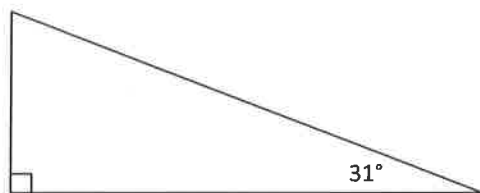
18. In the grid above, which ordered pair represents  $(0, 3)$ ?

- A. Point T
- B. Point B
- C. Point P
- D. Point K



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**SIXTH GRADE MATHEMATICS**

Use the right triangle below to answer question 19.



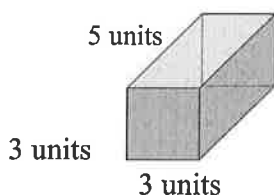
19. What is the measure of the third angle in the triangle above?

- A.  $31^\circ$
- B.  $59^\circ$
- C.  $90^\circ$
- D.  $149^\circ$

20. Tyson earns \$7 an hour and Kelly earns \$8 an hour. They each worked the same number of hours,  $x$ . Together they earned a total of \$75 last weekend. Which equation below represents this situation?

- A.  $7x - 75 = 8x$
- B.  $7x + 75 = 8x$
- C.  $7x - 8x = 75$
- D.  $7x + 8x = 75$

Use the figure below to answer question 21.



21. What is the surface area of the prism shown above?

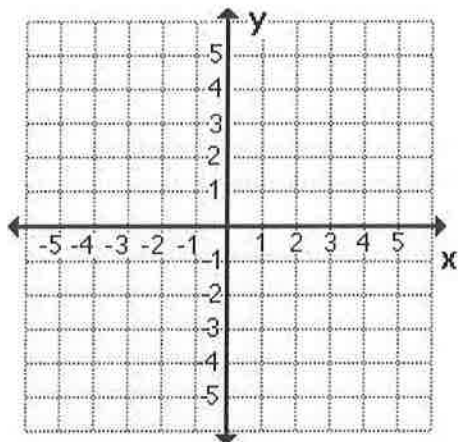
- A. 78 squared units
- B. 45 squared units
- C. 30 squared units
- D. 14 squared units

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**SIXTH GRADE MATHEMATICS**

22. What is the value of  $\frac{3-12\div 6+5\times 4}{7}$ ?

- A. 1
- B. 7
- C. 3
- D. -19

Use the coordinate grid below to answer question 23.



23. Which set of ordered pairs fall on a diagonal line?

- A. (4, 2) and (4, 0)
- B. (-3, 5) and (2, 5)
- C. (-2, -3) and (2, 3)
- D. (2, -4) and (2, 4)

24. Tessa bought potted plants for \$20.10. What is the cost per plant if she bought 6?

- A. \$3.35
- B. \$4.00
- C. \$9.40
- D. \$17.40

# SIXTH GRADE MATHEMATICS

25. Tim is making trail mix with 4 cups of raisins, 6 cups of peanuts and 2 cups of chocolate candy. What is the ratio of raisins to trail mix for each batch?

- A. 1:2
- B. 1:3
- C. 2:3
- D. 1:6

Use the table below to answer question 26.

Rented Movies	Number
Adventure	12
Comedy	14
Drama	16

26. Use the chart above to determine the probability that the movie rented was not a comedy.

- A.  $\frac{2}{7}$
- B.  $\frac{1}{3}$
- C.  $\frac{8}{21}$
- D.  $\frac{2}{3}$

27. One container holds 3.8 liters of liquid. Another container holds 500 milliliters of the same liquid. When the two liquids are combined in a third container, how many milliliters will this container need to hold?

- A. 5308.0 milliliters
- B. 503.8 milliliters
- C. 5380.0 milliliters
- D. 4300.0 milliliters

28. The football coach wants to cut 18 jump ropes, each 6 feet long. How many yards of rope should he buy?

- A. 3 yards
- B. 24 yards
- C. 36 yards
- D. 108 yards

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**SIXTH GRADE MATHEMATICS**

29. Joshua walked  $\frac{3}{8}$  mile to his friend's house. Together they walked  $\frac{1}{2}$  mile to the store to get a snack. Then they walked to the park, another  $\frac{3}{4}$  mile. How far did Joshua walk in all?

A.  $1\frac{1}{2}$  miles

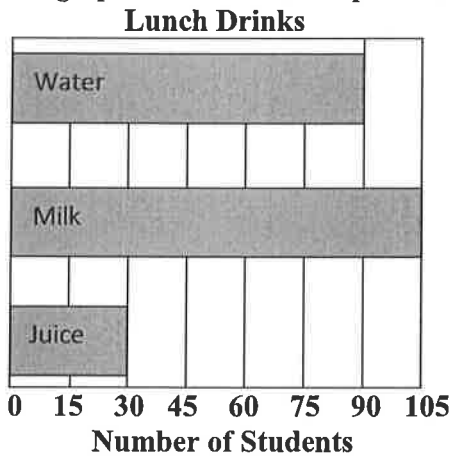
B.  $1\frac{5}{8}$  miles

C.  $1\frac{3}{4}$  miles

D.  $1\frac{7}{14}$  miles

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**SIXTH GRADE MATHEMATICS**

Use the graph below to answer question 30.



30. Students can choose water, milk or juice for lunch. The percentages for drinks chosen today are shown on the graph. There are 225 students who eat lunch each day. What percent of students chose water?

- A. 10%
- B. 25%
- C. 40%
- D. 55%

31. Beth buys the *Pioneer Press* newspaper each day at the news stand. If the daily paper (Monday through Saturday) costs 50¢ and the Sunday paper costs \$1.00, how much does she spend per week on the newspaper?

(no calculator)

- A. \$4.00 per week
- B. \$3.00 per week
- C. \$2.50 per week
- D. \$1.50 per week

32. Hannah can earn \$36.05 if she sells 7 rolls of wrapping paper. How much does each roll of wrapping paper cost?

(no calculator)

- A. \$43.05
- B. \$29.05
- C. \$25.15
- D. \$5.15

