

Student Name _____



**Grade 7
Mathematics
Test Booklet**

Practice Test

TEST BOOKLET SECURITY BARCODE



Mathematics

1. Which expressions are equivalent to $3\frac{1}{4} - \left(-\frac{5}{8}\right)$?

Select **all** that apply.

A. $3\frac{1}{4} - \left(\frac{5}{8}\right)$

B. $3\frac{1}{4} + \left(\frac{5}{8}\right)$

C. $3\frac{1}{4} + \left(-\frac{5}{8}\right)$

D. $3\frac{1}{4} + \left(+\frac{5}{8}\right)$

E. $-3\frac{1}{4} + \left(-\frac{5}{8}\right)$

F. $-3\frac{1}{4} + \left(+\frac{5}{8}\right)$

2. At the start of the month, the value of an investment was \$48.45. By the end of the month, the value of the investment changed by a loss of \$13.80.

What was the value, in dollars, of the investment at the end of the month?

Enter your answer in the box.

Mathematics

4. Which expression is equivalent to $\frac{1}{4}(8 - 6x + 12)$?
- A. $\frac{7}{2}x$
 - B. $-\frac{13}{2}x$
 - C. $-6x + 14$
 - D. $-\frac{3}{2}x + 5$
5. In which situation could the quotient of $-24 \div 3$ be used to answer the question?
- A. The temperature of a substance decreased by 24°C per minute for 3 minutes. What was the overall change of the temperature of the substance?
 - B. A football team lost 24 yards on one play, then gained 3 yards on the next play. How many total yards did the team gain on the two plays?
 - C. Julia withdrew a total of \$24 from her bank account over 3 days. She withdrew the same amount each day. By how much did the amount in her bank account change each day?
 - D. A cookie jar contains 24 cookies. Each child receives 3 cookies. How many children are there?

8. In which of these situations would the answer to the question be 0?
- A. Teddy jumped into a pool from a diving board 8 feet above the water. He sank 8 feet and then swam straight up to the surface of the water. How many feet did Teddy swim?
 - B. Jerry left his house and walked 1.5 miles directly west. Then he walked 1.5 miles directly east. At this point, how many miles was Jerry from his house?
 - C. A trail begins at an elevation of -50 feet. The trail ends at an elevation of 50 feet. By how many feet does the elevation of the trail change from beginning to end?
 - D. The low temperature one day was -3° Celsius. The high temperature that day was 3° Celsius. What is the difference between the low temperature and the high temperature that day?

9. Jessica rented 1 video game and 3 movies for a total of \$11.50.

- The video game cost \$4.75 to rent.
- The movies cost the same amount each to rent.

What amount, in dollars, did Jessica pay to rent each movie?

Enter your answer in the box.

11. Which expressions have products that are positive?

Select **all** that apply.

A. $(-5)(0.2)(-9)$

B. $\left(\frac{2}{3}\right)\left(\frac{3}{2}\right)\left(-\frac{1}{2}\right)$

C. $(6)(-3)(8)(-7)$

D. $\left(-4\frac{1}{3}\right)\left(-\frac{1}{4}\right)\left(-5\frac{1}{2}\right)\left(-\frac{7}{9}\right)$

E. $\left(\frac{5}{6}\right)(-10)\left(3\frac{4}{5}\right)(2)$

F. $(-1.2)(-3.5)(2.7)(-0.8)$

12. Two equations are shown.

- Equation 1: $-0.5x - 4 = 1.5$
- Equation 2: $-0.5(x - 4) = 1.5$

Select **each** statement that **must** be true.

- A. x represents a negative value in both equations.
- B. x represents a positive value in both equations.
- C. x represents a positive value in one equation and a negative value in the other equation.
- D. The value x represents in Equation 1 is less than the value x represents in Equation 2.
- E. The value x represents in Equation 1 is greater than the value x represents in Equation 2.



Use the information provided to answer Part A and Part B for question 14.

A store owner paid \$15 for a book. She marked up the price of the book by 40% to determine its selling price.

14. Part A

What is the selling price, in dollars, of the book?

Enter your answer in the box.

Part B

A customer buys a different book that has an original selling price of \$38. The book is discounted 25%. The customer must pay a 6% sales tax on the discounted price of the book.

What is the total amount, in dollars, the customer pays for the discounted book?

Enter your answer in the box.

15. Sal exercised by stretching and jogging 5 days last week.

- He stretched for a total of 25 minutes during the **week**.
- He jogged for an equal number of minutes each of the 5 days.
- He exercised for a total of 240 minutes.

Elena also exercised by stretching and jogging 5 days last week.

- She stretched for 15 minutes each **day**.
- She jogged for an equal number of minutes each of the 5 days.
- She exercised for a total of 300 minutes.

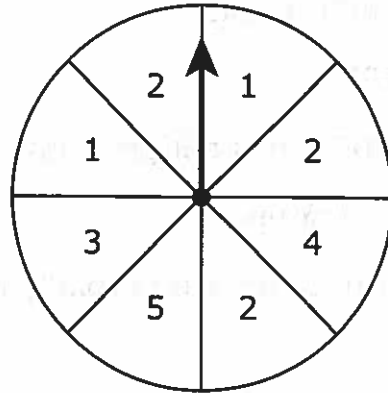
Determine the number of minutes Sal jogged each day last week and the number of minutes Elena jogged each day last week. Show your work or explain all the steps you used to determine your answers.

Enter your answers and your work or explanation in the space provided.





17. The spinner shown is divided into 8 equal sections.



The arrow on this spinner is spun once.

What is the probability that the arrow will land on a section labeled with a number **greater** than 3?

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



19. Chris made at least one error as she found the value of this expression.

$$2(-20) + 3\left[\frac{5}{4}(-20)\right] + 5\left[\frac{2}{5}(50)\right] + 4(50)$$

Step 1: $2(-20) + 3(-25) + 5(20) + 4(50)$

Step 2: $(3 + 2)(-20 + -25) + (5 + 4)(20 + 50)$

Step 3: $5(-45) + 9(70)$

Step 4: $-225 + 630$

Step 5: 405

Identify the step in which Chris made her first error. After identifying the step with the first error, write the corrected steps and find the final answer.

Enter the identified step, your work, and the final answer in the space provided.

20. A train traveled $\frac{1}{5}$ of the distance between two cities in $\frac{3}{4}$ hour.

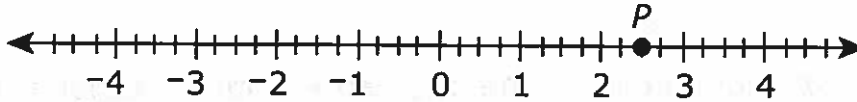
At this rate, how many hours will it take the train to travel the entire distance between these two cities?

- A. $\frac{3}{20}$
- B. $\frac{4}{15}$
- C. $3\frac{3}{4}$
- D. $6\frac{2}{3}$



Use the information provided to answer Part A and Part B for question 22.

Point P is plotted on the number line.



22. Part A

Point Q is the opposite of point P . Determine the location of point Q on the number line. Explain how you determined the location of point Q on the number line.

Enter your answer and your explanation in the space provided.

Part B

Point S is located at $\frac{5}{4}$ on the number line. A student claims that the location of point S is to the right of the location of point P on the number line.

- Explain whether the student's claim is correct or incorrect.
- Write an inequality that describes the relationship between the value of point P and the value of point S .

Enter your explanation and your inequality in the space provided.



24. Rosy waxes $\frac{2}{3}$ of her car with $\frac{1}{4}$ bottle of car wax.

At this rate, what fraction of the bottle of car wax will Rosy use to wax her entire car?

- A. $\frac{1}{8}$
- B. $\frac{1}{6}$
- C. $\frac{3}{8}$
- D. $\frac{3}{4}$

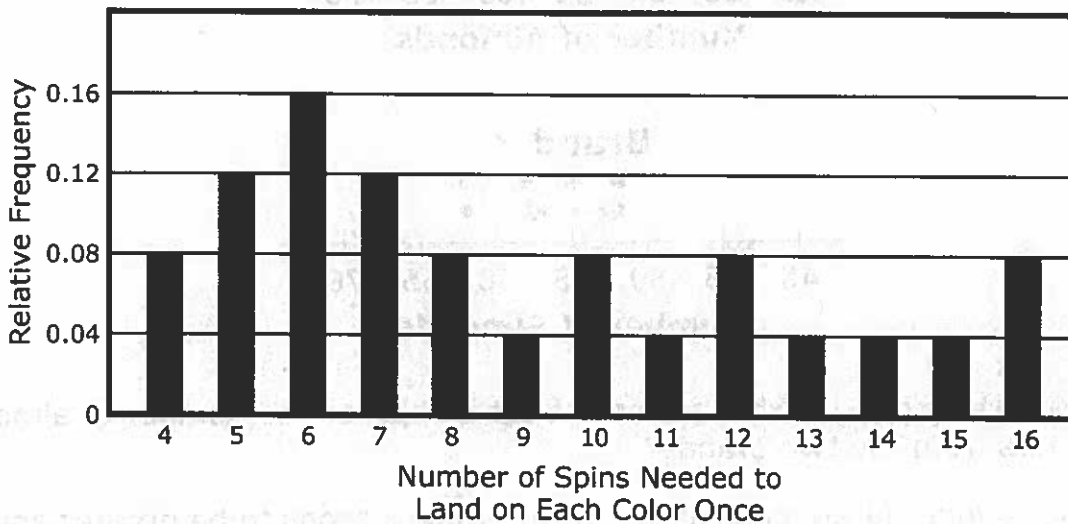




Part B

Lori designs a computer simulation with 25 trials and uses the data from the simulation to create a graph. The graph shows the relative frequency of the number of spins in her simulation to land on each color once. Using the graph, what is the probability that a player lands on each color once in less than 7 spins?

Lori's Simulation Results



Enter your answer in the box.

- 26.** Consider the equation $5 + x = n$.

What must be true about any value of x if n is a negative number? Explain your answer. Include an example with numbers to support your explanation.

Enter your answer, your explanation, and your example in the space provided.