

Grade**8****Prerequisite Skills Test**

Find the sum or difference. Write your answer in simplest form.

1. $-\frac{1}{2} + \left(-\frac{3}{5}\right)$

2. $-9.9 - (-6.9)$

3. Write $\frac{1}{2}$ as a decimal.

Find the product or quotient. Write your answer in simplest form.

4. $-\frac{2}{3} \div \left(-\frac{3}{4}\right)$

5. $-9.9(-9.9)$

6. Evaluate $\frac{-\frac{3}{4}}{-\frac{1}{3}+1}$. Write your answer in simplest form.

Simplify.

7. $-\frac{1}{4}x - 9 + \frac{5}{8}x - 5$

8. $\left(\frac{1}{2}x - 1\right) - \left(\frac{3}{8}x - 2\right)$

9. $\frac{1}{6}(12x - 24) + 2x$

10. Factor $\frac{1}{9}$ out of $\frac{1}{9}x - \frac{10}{9}$.

11. Solve $\frac{x}{25} + \frac{3}{5} = -\frac{2}{5}$.

12. It costs \$12.50 to rent a canoe and \$6.25 to use the canoe for an hour. You have \$25. Write an equation that represents the number h of hours you can rent the canoe.

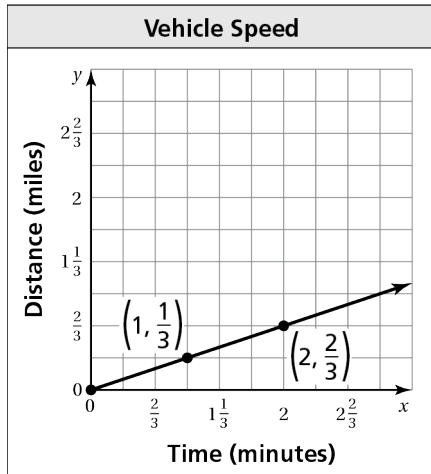
13. You install 618 feet of fencing along the perimeter of a rectangular yard. The width of the yard is 152 feet. What is the length of the yard?

14. A person jogs $\frac{1}{8}$ mile in $\frac{1}{48}$ hour. What is the person's speed in miles per hour?

15. Tell whether $20 : 4$ and $30 : 6$ form a proportion.

**Grade
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Prerequisite Skills Test (continued)

16. The graph shows the speed of a vehicle. Find the speed in miles per minute.
17. Write an equation for the proportional relationship shown in the table.



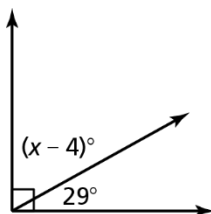
x	0.5	1	1.5	2
y	22	44	66	88

18. A scale drawing of a square has a side length of 8 millimeters. The drawing has a scale of 1 mm : 4 km. Find the actual perimeter and area of the square.
19. An amusement park is open May through September. The table shows the attendance each month as a portion of the total attendance. How many times more guests visit the amusement park in the busiest month than in the least busy month?

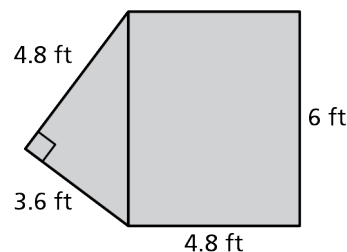
Month	May	June	July	August	September
Portion of Guests	0.11	$\frac{3}{10}$	25%	0.24	$\frac{1}{10}$

20. Is it possible to construct a triangle with side lengths of 2 meters, 5 meters, and 6 meters?

21. Find the value of x .



22. Find the area of the figure.



Prerequisite Skills Test Item Analysis

Item Number	Skills
1	adding rational numbers
2	subtracting rational numbers
3	writing a rational number as a decimal
4	dividing rational numbers
5	multiplying rational numbers
6	evaluating a complex fraction
7	simplifying an algebraic expression
8	simplifying an algebraic expression
9	simplifying an algebraic expression
10	factoring an algebraic expression
11	solving a linear equation
12	writing a linear equation
13	solving a word problem leading to a linear equation
14	computing a unit rate
15	deciding whether two quantities are in a proportional relationship
16	using a graph to describe a proportional relationship
17	using a table to write an equation for a proportional relationship
18	solving a problem about perimeter and area given a scale drawing
19	comparing numbers in different forms
20	constructing triangles from three side measures
21	solving a simple equation for an unknown angle in a figure
22	finding the area of a composite figure