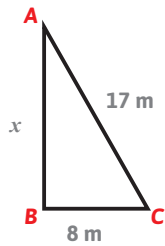


• Student Portion •

DIRECTIONS:

- Read each item carefully.
- Follow the directions to solve each problem.
- Circle your final answer(s).

1. Triangle ABC is a right triangle. Find the length of \overline{AB} .



2. Solve.

$$\frac{x+3}{5} = \frac{x-5}{6}$$

3. Simplify.

$$\frac{a^5 b^{-3}}{b^3 a^2}$$

4. Simplify.

$$5q^{-1}r^2 + 3qr - r$$

5. Simplify.

$$\frac{\frac{3}{x}}{\frac{2}{x+1}}$$

6. Simplify.

$$\frac{x}{x-2} + \frac{3}{x-1}$$

7. Simplify.

$$(5\sqrt{6})(2\sqrt{12}) + (9\sqrt{8})$$

8. Express without exponents.

$$\left(\frac{8}{27}\right)^{-\frac{1}{3}}$$

9. Simplify.

$$\frac{2\sqrt{28}}{\sqrt{7}}$$

10. Factor.

$$x^9 - 16b^2$$

11. Simplify.

$$(9i)(\sqrt{-64})$$

12. Rewrite the fraction so that there are no radicals in the denominator.

$$\frac{3}{1 + \sqrt{3}}$$

13. Solve for x .

$$x^2 - 5x = -2$$

14. Without graphing, tell which of the following equations will create a graph in the shape of a circle.

A. $y = 3x$

B. $y^2 = 4x^2 - 12$

C. $y = \frac{4}{x}$

D. $y = x^2 - 25$

E. $x^2 + y^2 = 16$

15. A glacier moves at a rate of 5 centimeters per month. At that rate, how many meters will the glacier move in a year? Use unit multipliers (conversion factors) to find the answer.



Helpful Facts:

100 centimeters (cm) = 1 meter (m) | 1,000 meters (m) = 1 kilometer (km) | 12 months (mo) = 1 year (yr)
