

If c is the measure of the hypotenuse of a right triangle, find each missing measure.

1) $b = 12, c = 13, a = ?$

2) $a = 6, c = 12, b = ?$

3) $a = 11, b = 4, c = ?$

Determine whether the following side measures would form right triangles. Explain why or why not.

4) $16, \sqrt{32}, 20$

5) $6, 8, 10$

6) $11, 5, 13$

Find the distance between each pair of given points.

7) $(6, -7), (-2, 8)$

8) $(3, -4), (-4, -4)$

9) $(-2, -5), (0, 8)$

Find the midpoint of the line segment with the given endpoints.

10) $(4, -3), (5, 5)$

11) $(11, -10), (-3, 9)$

12) $(8, 2), (9, 8)$

Simplify the following rational expressions.

13) $\frac{25x^2yz^3}{5xy^3z^2}$

14) $\frac{x^2 + x - 6}{2x^2 - 8}$

15) $\frac{2x^2 - 4x - 6}{2x^2 - 8x - 10}$

16) $\frac{2x - 8}{x^2 - 16}$

Multiple or Divide the following rational expressions.

17) $\frac{24xy^2}{8x^4y^3} \cdot \frac{12x^3y^2}{36x^2y}$

18) $\frac{x^2 + 9x + 8}{4x^2 - 9} \cdot \frac{2x - 3}{x + 1}$

19) $\frac{x^2 - 9}{2x^2 + 13x - 7} \div \frac{2x^2 + 7x + 3}{4x^2 - 1}$

20) $\frac{x^2 + 7x + 12}{x^2 + 3x - 10} \div \frac{x^2 - x - 20}{x^2 - 25}$