Roots and Exponents Review

Find the square root(s).

1) $-\sqrt{4}$

2) $\sqrt{\frac{16}{25}}$

Evaluate the expression.

3) $3\sqrt{49} + 5$

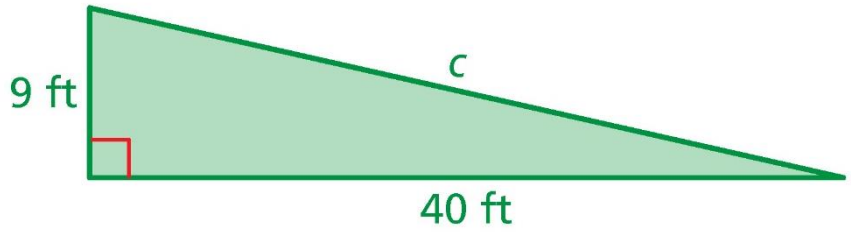
4) $10 - 4\sqrt{16}$

Evaluate the expression.

5) $\frac{1}{4} + \sqrt{\frac{100}{4}}$

Find the missing length of the triangle.

6)



Classify the real number.

7) $-\sqrt{225}$

8) $-1\frac{1}{9}$

9) $\sqrt{41}$

10) $\sqrt{17}$

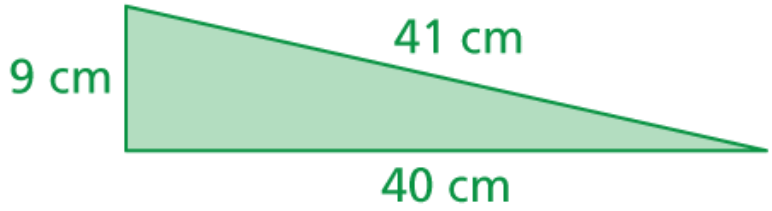
Estimate the square root to the nearest (a) integer and (b) tenth.

11) $\sqrt{38}$

12) $\sqrt{115}$

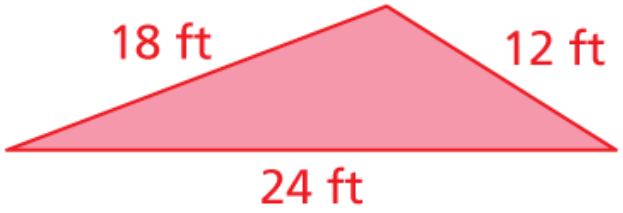
Tell whether the triangle with the given side lengths is a right triangle.

13)



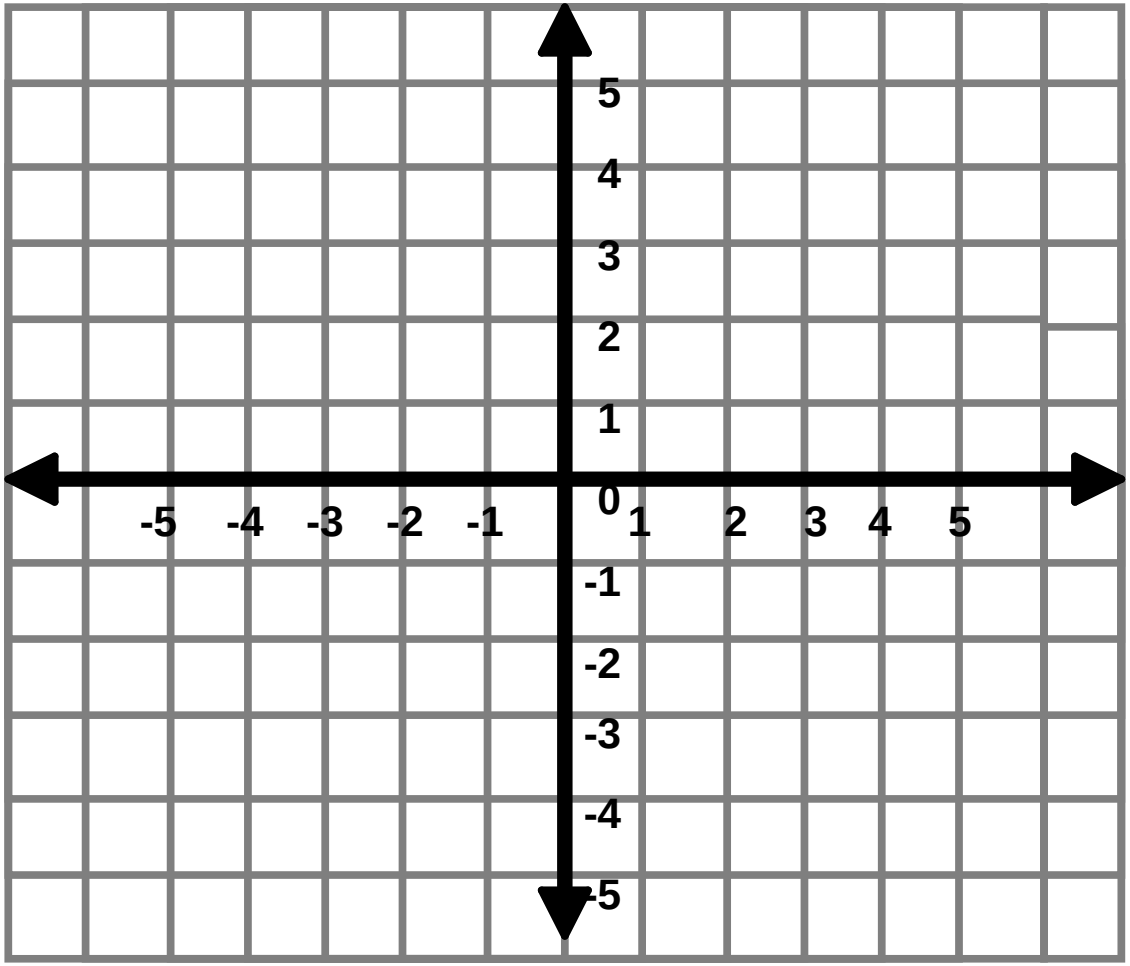
Tell whether the triangle with the given side lengths is a right triangle.

14)



Finding the Distance Between Two Points

15) Find the distance between (1, 5) and (-5, -3).



Write the product using exponents.

16) $(-15) \cdot (-15) \cdot (-15)$

17) $\left(\frac{1}{12}\right) \cdot \left(\frac{1}{12}\right) \cdot \left(\frac{1}{12}\right) \cdot \left(\frac{1}{12}\right) \cdot \left(\frac{1}{12}\right)$

Evaluate the expression.

18) -2^3

19) $10 + 3^3 \div 9$

Simplify the expression. Write your answer as a power.

20) $9^{10} \cdot 9$

21) $(6^6)^5$

22) $(2 \cdot 10)^7$

23) $\dfrac{(-3.5)^{13}}{(-3.5)^9}$

Evaluate the expression.

24) $5^{-2} \cdot 5^{2}$

25) $\dfrac{-8}{(-8)^{3}}$

Write the number in standard form.

26) 3×10^{7}

27) 9.05×10^{-3}

Evaluate the expression. Write your answer in scientific notation.

28) $(7.8 \times 10^7) + (9.9 \times 10^7)$

29) $(6.4 \times 10^5) - (5.4 \times 10^4)$

Evaluate the expression. Write your answer in scientific notation.

30) $(3.1 \times 10^{6}) \times (2.7 \times 10^{-2})$

31) $(9.6 \times 10^{7}) \div (1.2 \times 10^{-4})$

32) **CRITICAL THINKING** Is $(xy^2)^3$ the same as $(xy^3)^2$? Explain.