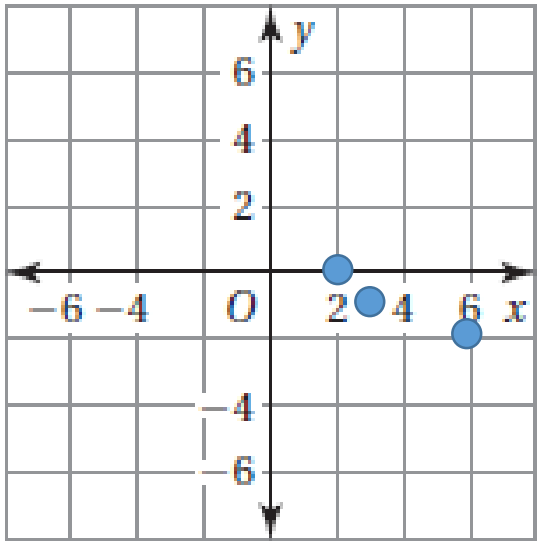
Chapter 10
Review

Graph the function. Describe the domain and range.

1. $y = -\sqrt{x - 2}$



$Domain: x \geq 2$

$Range: y \leq 0$

x	2	3	6
y	0	-1	-2

Simplify the expressions (Do Not approximate).

2. $\frac{5}{\sqrt{3}} - \frac{3}{\sqrt{3}}$ $\frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$

3. $\frac{2}{2+\sqrt{5}}$ $\frac{4-2\sqrt{5}}{2^2-(\sqrt{5})^2} = \frac{4-2\sqrt{5}}{-1} = -4+2\sqrt{5}$

Solve the Equation.

4. $3\sqrt{x-5} = 9x$ *No Solution*

5. $-\sqrt{x-7} - 2 = -4$ $x = 11$

6. $\sqrt{x+2} - \sqrt{2x-7}$ $x = 9$

7. Demonstrate whether the triangle with the following side measures is a right triangle.

7 m, 18.5 m, 19.5 m

$$7^2 + 18.5^2 = 19.5^2$$

$$49 + 342.25 = 19.5^2$$

$$391.25 = 380.25$$

Find the distance between the two points

8. $(7,1), (2,3)$

$d = \sqrt{(2-7)^2 + (3-1)^2}$

$d = \sqrt{(5)^2 + (2)^2}$

$d = \sqrt{25 + 4}$

$d = \sqrt{29}$

9. $(3,6), (-3,2)$

$d = \sqrt{(-3-3)^2 + (2-6)^2}$

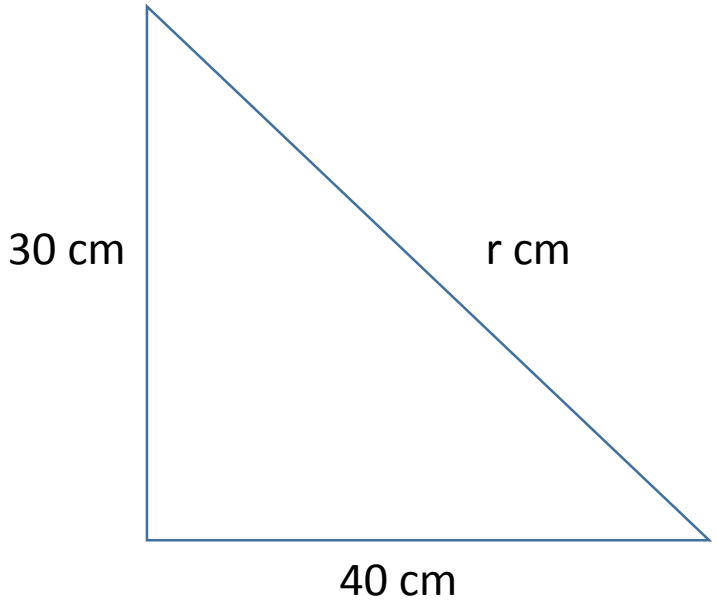
$d = \sqrt{(-6)^2 + (-4)^2}$

$d = \sqrt{36 + 16}$

$d = \sqrt{52}$

$d = 2\sqrt{13}$

10. Find the missing length of the triangle



$$30^2 + 40^2 = r^2$$

$$900^2 + 1600^2 = r^2$$

$$2500 = r^2$$

$$50 = r$$

11. The formula $V = \sqrt{PR}$ relates the voltage V (in volts), power P (in watts), and resistance R (in ohms) of an electrical circuit. What is the resistance of a 100-watt stereo system on a 120-volt circuit?

$$120 = \sqrt{100R}$$

$$14400 = 100R$$

$$144\ ohms = R$$