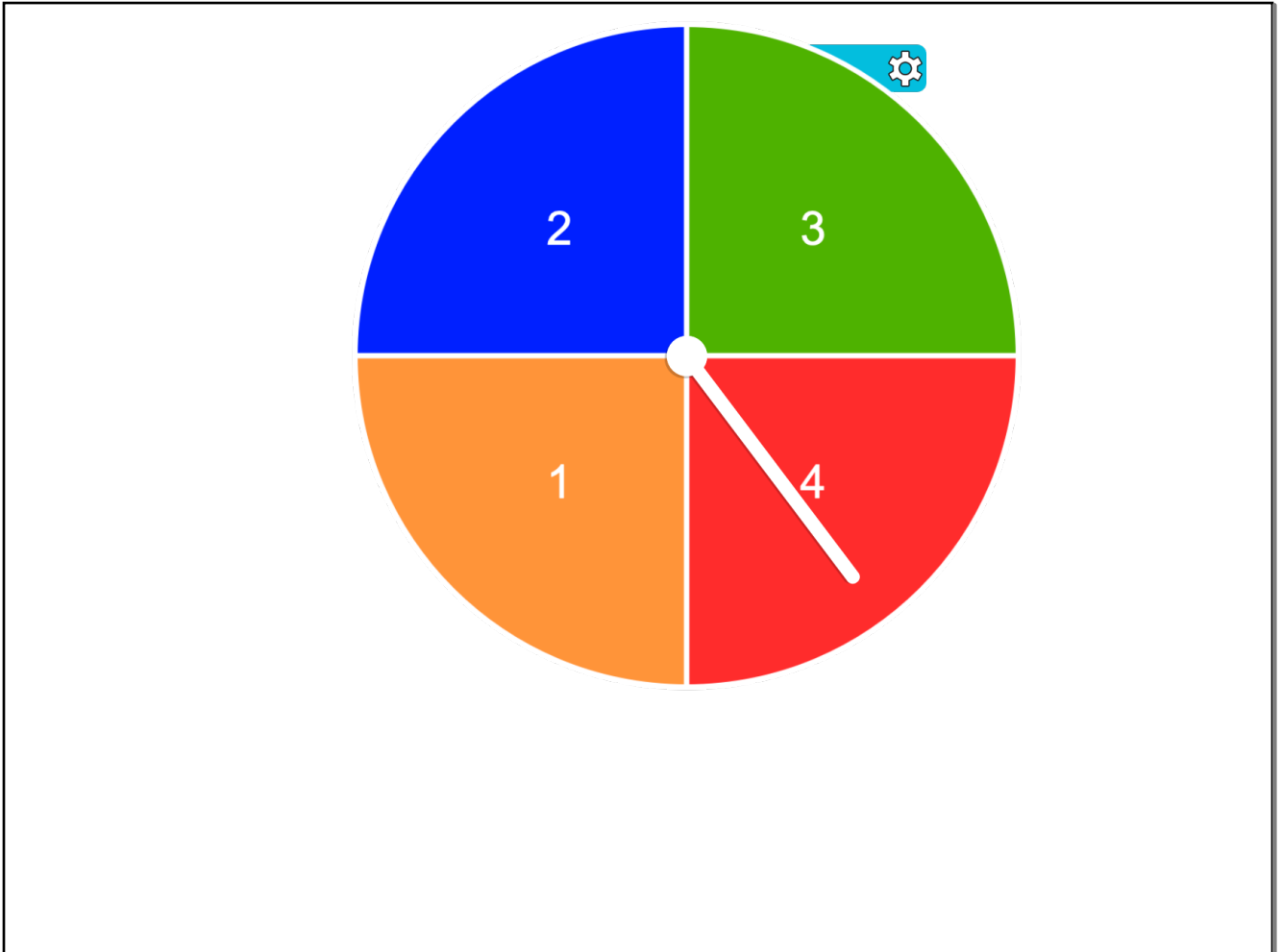
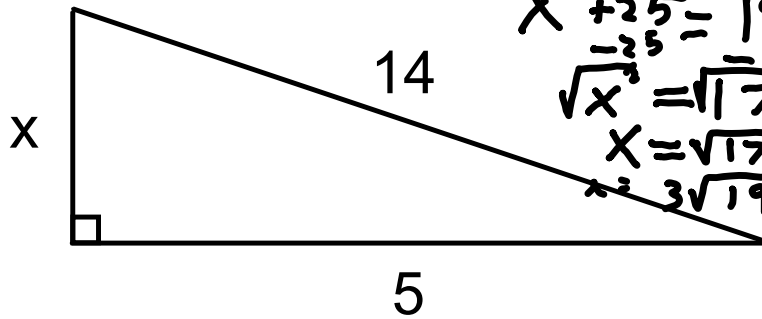


# HW Solutions



Solve for x.



$$x^2 + 5^2 = 14^2$$

$$x^2 + 25 = 196$$

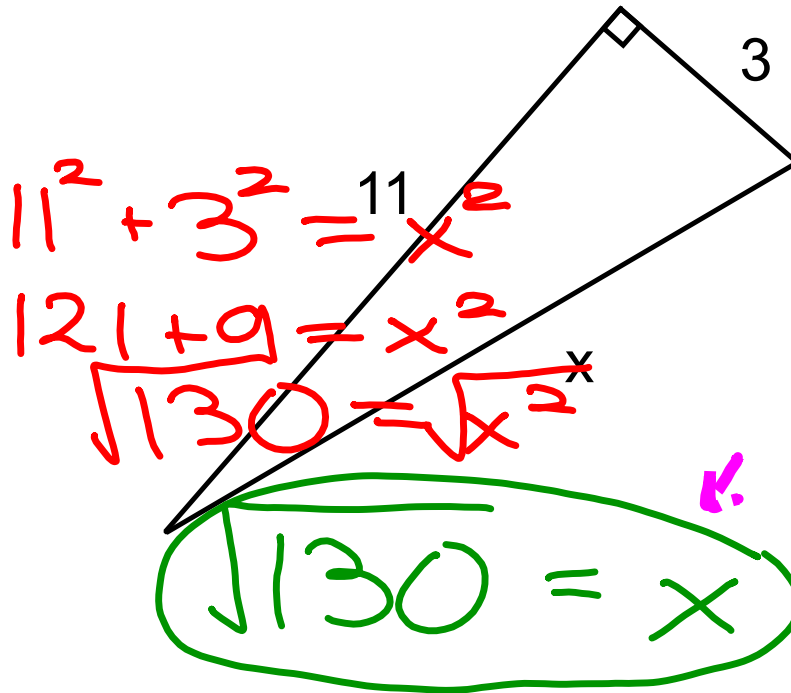
$$\begin{array}{r} x^2 + 25 = 196 \\ -25 \quad -25 \\ \hline x^2 = 171 \end{array}$$

$$x = \sqrt{171}$$

$$x = 3\sqrt{19}$$

$$\begin{array}{r} 14 \\ \times 14 \\ \hline 56 \\ 196 \\ \hline 196 \end{array}$$

Solve for x.



What is the distance between (3,4) and (9,7)?

$$\begin{aligned} 9-3 &= 6 \\ 7-4 &= 3 \end{aligned}$$

$$\begin{aligned} 6^2 + 3^2 &= x^2 & \sqrt{45} &= \sqrt{9 \cdot 5} \\ 36 + 9 &= x^2 & & 3\sqrt{5} \\ 45 &= x^2 \\ \mathbf{3\sqrt{5} = x} \end{aligned}$$

☺

What is the distance between  $(-2, 1)$  and  $(-8, -5)$ ?

$$\begin{aligned}
 -2 - (-8) &= 6 & x &= 6\sqrt{2} \\
 1 - (-5) &= 6 \\
 6^2 + 6^2 &= x^2 & \frac{3\sqrt{4 \cdot 2}}{6\sqrt{2}} \\
 \frac{36 + 36}{\sqrt{72}} &= \frac{x^2}{\sqrt{9 \cdot 8}} & \frac{3\sqrt{8}}{3\sqrt{8}} \\
 & & \frac{3\sqrt{8}}{3\sqrt{8}}
 \end{aligned}$$

Simplify

$$\sqrt{24}$$

$$\begin{array}{l} \sqrt{6 \cdot 4} \\ 2\sqrt{6} \end{array}$$

Simplify

$$2\sqrt{25}$$

$$2 \cdot 5$$

$$\textcircled{10}$$



Simplify

$$\sqrt{60x^4y^7}$$

$$\sqrt{4x^4y^6 \cdot 15y}$$

$$2x^2y^3\sqrt{15y}$$

Simplify

$$\sqrt{88m^3p^2r^5}$$

$m^2 \cdot m$        $r^4 \cdot r$

$$\begin{array}{l} \sqrt{88} \\ \sqrt{4 \cdot 22} \\ 2\sqrt{22} \\ \hline 2m^2r^2\sqrt{22mr} \end{array}$$

What is the distance between  $(-4,6)$  and  $(5,2)$ ?

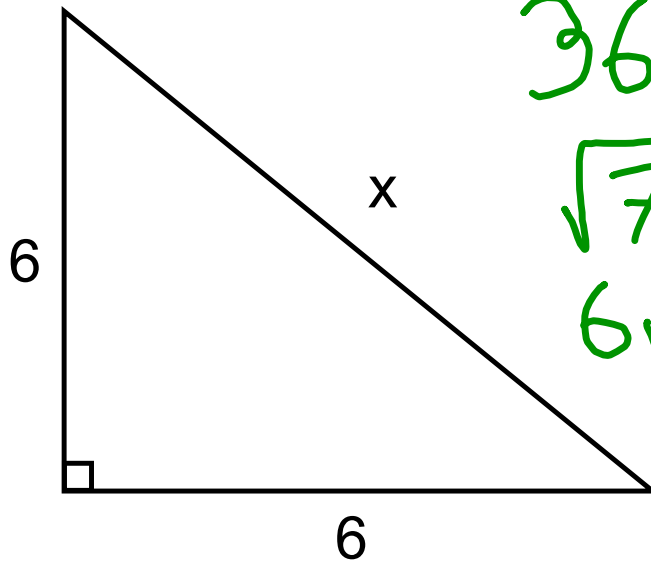
$$\begin{aligned}d &= \sqrt{(5 - (-4))^2 + (2 - 6)^2} \\d &= \sqrt{9^2 + (-4)^2} \\d &= \sqrt{81 + 16} \\d &= \sqrt{97}\end{aligned}$$

Simplify

$$\sqrt{99ab^5c^2}$$

$$3b^2/c \sqrt{11ab}$$

Solve for x.



$$36 + 36 = x^2$$

$$\sqrt{72} = \sqrt{x^2}$$

$$6\sqrt{2} = x$$

Simplify

$$4\sqrt{66g^2h^4}$$

$$4|g|h^2\sqrt{66}$$

Simplify

$$\sqrt{56}$$

What is the distance between  $(4, -4)$  and  $(9, -8)$ ?



Simplify

$$3\sqrt{18}$$

Simplify

$$7\sqrt{63m^3p}$$

Simplify

$$5\sqrt{81q^5}$$

Simplify

$$\sqrt{28a^2b^3}$$

Simplify

$$\sqrt{75qr^3}$$

Simplify

$$3\sqrt{25t^2}$$

March 23, 2022

