$$\sqrt{x} \qquad \left(\sqrt{2x+3}\right)^2 = (5)^2$$

$$2x + 3 = 25$$

$$\left(\sqrt{x}\right)^2 = (8)^2$$

$$x = 64$$

$$x = 64$$

Exercises

Solve each equation.

1. $3 + 2x\sqrt{3} = 5$

$-3 \qquad -3$

$2x\sqrt{3} = 2$

$\dfrac{2x\sqrt{3}}{2\sqrt{3}} = \dfrac{2}{2\sqrt{3}}$

$x = \dfrac{1}{\sqrt{3}}\left(\dfrac{\sqrt{3}}{\sqrt{3}}\right) = \dfrac{\sqrt{3}}{3}$

4. $\sqrt{5 - x} - 4 = 6$

$\qquad +4 \quad +4$

$(\sqrt{5-x})^2 = (10)^2$

$5 - x = 100$

$-5 \qquad -5$

$(-1)(-x) = 95(-1)$

$\boxed{x = -95} \checkmark$

7. $\sqrt{21} - \sqrt{5x - 4} = 0$

$+\sqrt{5x-4} \qquad +\sqrt{5x-4}$

$(\sqrt{21})^2 = (\sqrt{5x-4})^2$

$21 = 5x - 4$

10. $4\sqrt[3]{2x + 11} - 2 = 10$

$\qquad +2 \quad +2$

$\dfrac{4\sqrt[3]{2x+11}}{4} = \dfrac{12}{4}$

$(\sqrt[3]{2x+11})^3 = (3)^3$

$2x + 11 = 27$

That's Radical Dude Activity

9. Solve for k.

$$\sqrt{k-9} - \sqrt{k} = -1$$

$$+\sqrt{k} \quad \sqrt{k}$$

$$\left(\sqrt{k-9}\right)^2 = \left(\sqrt{k}-1\right)^2$$

$$k-9 = k - 2\sqrt{k} + 1$$
$$-1$$

$$\frac{-10}{-2} = \frac{-2\sqrt{k}}{-2}$$

$$\left(5\right)^2 = \left(\sqrt{k}\right)^2$$

$$k = 25$$

10. Solve for h.

$$\sqrt{2h-5} = 1 - \sqrt{h-3}$$

$$\left(\sqrt{k}-1\right)\left(\sqrt{k}-1\right)$$

$$k - 2\sqrt{k} + 1$$

	$\sqrt{k}$	-1
$\sqrt{k}$	k	$-\sqrt{k}$
-1	$-\sqrt{k}$	1

10. Solve for h.

$$\left(\sqrt{h-5}\right)^2 = \left(-\sqrt{h-3}\right)^2$$

$$\left(1-\sqrt{h-3}\right)\left(1-\sqrt{h-3}\right)$$

$$h-5 = -2 - 2\sqrt{h-3} + h$$
$$-h \qquad\qquad\qquad -h$$

$$1 - \sqrt{h-3} - \sqrt{h-3} + h - 3$$

$$-5 = -2 - 2\sqrt{h-3}$$
$$+2 \quad +2$$

$$1 - 2\sqrt{h-3} + h - 3$$

$$\frac{-3}{-2} = \frac{-2\sqrt{h-3}}{-2}$$

$$\left(\frac{3}{2}\right)^2 = \left(\sqrt{h-3}\right)^2$$

$$\frac{9}{4} = h - 3$$
$$+3 \qquad +3$$

$$h = \frac{21}{4}$$

$$\sqrt{(x - 8)} = \sqrt{5} - \sqrt{x}$$

$$\sqrt{(x + 6)} = \sqrt{3} + \sqrt{x}$$

Homework

Finish "That's Radical Dude" activity.

Finish the worksheet.