

• Solve. Show works!

1.  $\sqrt{x-2} = 5$

$x = 27$

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

$x-2 = 25$   
 $+2 \quad +2$   
 $x = 27$

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

$x = 55$

$(7)^2 = (\sqrt{x-6})^2$

$49 = x-6$   
 $+6 \quad +6$   
 $55 = x$

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

$x = 49$

$\sqrt{x} - 2 = 5$   
 $+2 \quad +2$

$(\sqrt{x})^2 = (7)^2$

$x = 49$

4.  $7 = \sqrt{x-6}$

$x = 169$

$7 = \sqrt{x} - 6$   
 $+6 \quad +6$

$(13)^2 = (\sqrt{x})^2$

$169 = x$

5.  $x^2 - 7 = 57$

$x = 8$

$x^2 - 7 = 57$   
 $+7 \quad +7$

$\sqrt{x^2} = \sqrt{64}$

$x = 8$

6.  $-31 = -4x^2 + 5$

$x = 3$

$-31 = -4x^2 + 5$   
 $+5 \quad -5$

$-36 = -4x^2$   
 $-4 \quad -4$   
 $\sqrt{9} = \sqrt{x^2}$

$3 = x$

7.  $3x^2 + 5 = 53$

$x = 4$

$3x^2 + 5 = 53$   
 $-5 \quad -5$

$\frac{3x^2}{3} = \frac{48}{3}$

$\sqrt{x^2} = \sqrt{16}$

$x = 4$

8.  $\frac{2}{3}\sqrt{x} + 4 = 8$

$x = 36$

$\frac{2}{3}\sqrt{x} + 4 = 8$   
 $-4 \quad -4$

$\frac{2}{3}\sqrt{x} = 4 \cdot \frac{3}{2}$

$(\sqrt{x})^2 = (6)^2$

9.  $-2 + 4x^2 = 14$

$x = 2$

$-2 + 4x^2 = 14$   
 $+2 \quad +2$

$4x^2 = 16$   
 $\frac{4}{4} \quad \frac{16}{4}$

$\sqrt{x^2} = \sqrt{4}$

$x = 2$

10.  $\sqrt{x+6} = 1$

$x = -5$

$(\sqrt{x+6})^2 = (1)^2$   
 $x+6 = 1$

$-6 \quad -6$   
 $x = -5$

11.  $x^3 - 50 = 75$

$x = 5$

$x^3 - 50 = 75$   
 $+50 \quad +50$

$\sqrt[3]{x^3} = \sqrt[3]{125}$

$x = 5$

12.  $\sqrt[3]{27} + x = \sqrt[3]{64}$

$3 + x = 4$   
 $-3 \quad -3$   
 $x = 1$

$x = 1$