

$$r = \left(\frac{3V}{4\pi} \right)^{\frac{1}{3}}$$

$$(33) \quad V = 413$$

$$r = \left(\frac{3(413)}{4\pi} \right)^{\frac{1}{3}}$$

$$3 \times \sqrt[3]{(3(413)/(4\pi))}$$

$$r = \sqrt[3]{\frac{3(413)}{4\pi}}$$

$$4.62 \text{ in}$$

$$37. \left(b^{\frac{1}{3}} \right)^{\frac{3}{5}} = b^{\frac{3}{15}} = b^{\frac{1}{5}}$$

$$(19) \quad \sqrt[5]{c^2} \text{ OR } \left(\sqrt[5]{c} \right)^2 \leftarrow$$

$$2 \frac{1}{2}$$

$$2 \frac{1}{5}$$

1 Solve each equation.

Isolate a radical

a. $\sqrt{x+1} + 2 = 4$

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

$$x+1 = 4$$

$$x = 3$$

$$\begin{aligned} \sqrt{3+1} + 2 &= 4 \\ 2 + 2 &= 4 \checkmark \end{aligned}$$

2B. $(2y + 6)^{\frac{1}{4}} - 2 = 0$

$$\sqrt[4]{2y+6} - 2 = 0$$

$$(\sqrt[4]{2y+6})^4 = (2)^4$$

$$2y+6 = 16$$

$$2y = 10$$

$$y = 5$$

$$\begin{aligned} \sqrt[4]{2(5)+6} - 2 &= 0 \\ \sqrt[4]{16} - 2 &= 0 \\ 2 - 2 &= 0 \\ 0 &= 0 \end{aligned}$$

b. $(\sqrt{x-15})^2 = (3-\sqrt{x})^2$
 $(3-\sqrt{x})(3-\sqrt{x})$

$$x-15 = 9 - 3\sqrt{x} - 3\sqrt{x} + x$$

$$\begin{array}{rclcl} x-15 & = & 9 & -6\sqrt{x} & +x \\ -x & -9 & -9 & & -x \end{array}$$

$$\frac{-24}{-6} = \frac{-6\sqrt{x}}{-6}$$

$$\begin{aligned} \sqrt{16-15} &= 3-\sqrt{16} \\ \sqrt{1} &= 3-4 \\ 1 &= -1 \end{aligned}$$

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

$$16 = x$$

no solution

p. 425-426

11-18, 21, 23-28, 39-40, 42, 46