10.4 Solve Radical Equations

Examples: Solve each equation for the given variable.

1. $\sqrt{x}+7=16$ 2) $\sqrt{5t-11}=\sqrt{t+5}$ 3) $n=\sqrt{n+12}$ 4) $\sqrt{3y}+8=2$



5)

YOU TRY: Solve each equation for the given variable.

1. $\sqrt{x}-5=-2$ b) $\sqrt{7x-4}=\sqrt{5x+10}$ c) $-y=\sqrt{y+6}$ d) $6-\sqrt{2x}=10$
2. Look at Example 5, how long is the pendulum if each swing takes 1 s?

Harder Examples (not really ☺ ):

Review: $\sqrt[a]{x} \leftrightarrow $ $\sqrt[a]{x^{b}} \leftrightarrow $

Examples: Solve each equation for the given variable.

6.) $\sqrt[3]{m} = - 5$ 7.) $\sqrt[6]{n} = 2$

8.) $\sqrt{j^{3}} = 216$ 9.) $\sqrt[4]{k^{5}} = - 243$

10.) $\sqrt[3]{c^{2}} + 14 = 63$ 11.) $- 3\sqrt{d^{7}} - 148 = 236$

12.) $\sqrt{\left(6n + 11\right)^{5}}= - 243$ 13.) $\sqrt[3]{2c + 11} = 4$

14.) $\sqrt[3]{7 - d} + 2 = - 1$ 15.) $\sqrt[3]{\left(2p - 5\right)^{4}} = 81$

6.) $- 5\sqrt[4]{4k - 1} - 3 = 12$ 7.) $\sqrt{\left(m - 7\right)^{3}}= 64$

Hw: Section 10.4 p. 636 #7-23 odd, 31, 32