

Sec. 10.4 Solving Radical Equations

extraneous solution: an apparent solution that does not satisfy the original equation.

Problem 1: Solve.

a. $\sqrt{x} + 11 = 21$

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

c. $\sqrt{3m - 6} = \sqrt{m + 23}$

d. $\sqrt{7x - 4} = \sqrt{5x + 10}$

e. $x = \sqrt{-x + 6}$

f. $-y = \sqrt{y + 6}$

g. $\sqrt{4r} + 7 = 3$

h. $6 - \sqrt{2x} = 10$

Problem 2: The velocity of a projectile is determined by the function $v = \sqrt{\frac{s}{0.03}}$, where s is the horizontal distance in meters traveled by the projectile. If the velocity of a projectile is measured at 150 m/s, what is the distance the projectile travels?