

MODULE 7 Polynomial Equations**LESSON 7-1****Practice and Problem Solving: A/B**

1. $x = -1$, $x = -\frac{1}{4}$, or $x = 1$
2. $x = -4$, $x = 0$, or $x = 6$
3. $x = -7$, $x = 0$, or $x = 1$
4. $x = -2$, $x = 0$, or $x = 4$
5. $x = -1$; $f(x) = (x+1)(x+1)(x+1)$
6. $x = -4$ or $x = 3$; $f(x) = (x-3)(x+4)(x+4)$
7. $x = -7$, $x = -4$, or $x = 1$
8. $x = -5$, $x = -\frac{1}{3}$, or $x = 2$
9. a. $x^3 + x^2 - 2x - 8 = 0$
 - b. ± 1 , ± 2 , ± 4 , ± 8
 - c. $x = 2$ or $x = \frac{-3 \pm i\sqrt{7}}{2}$; no, 2 of the roots are irrational numbers
 - d. 2 m wide, 4 m long, and 1 m deep

Practice and Problem Solving: C

1. $x = -5$, $x = 0$, or $x = 7$
2. $x = 0$, $x = 3$, or $x = 4$
3. $x = 2$; $f(x) = (x-2)^3$
4. $x = -4$, $x = -2$; $f(x) = (x+2)(x+4)^2$
5. $x = -8$, $x = 0$, or $x = 6$
6. $x = -5$, $x = 0$, $x = \frac{1}{5}$, or $x = 1$
7. $x = -3$, $x = 0$, or $x = 1$
8. $x = -3$, $x = 0$, $x = \frac{1}{3}$, or $x = 1$
9. a. $2x^3 - 4x^2 - 64 = 0$
 - b. ± 1 , ± 2 , ± 4 , ± 8 , ± 16 , ± 32 , ± 64
 - c. $x = 4$, or $x = -1 \pm i\sqrt{7}$; no, 2 of the roots are irrational numbers
 - d. 4 in. wide, 8 in. long, and 2 in. deep