Section 6.6 Solving Equations by Factoring

1. If $(x-2)(x+1) = 10$, then

   (a) $x - 2 = 10$ or $x + 1 = 10$

   (b) $x = 4$ or $x = -3$

   (c) $x = 2$ or $x = -1$

   (d) $x = 5$ or $x = -2$

2. If $(x-3)(x+4) = 18$, then

   (a) $x - 3 = 18$ or $x + 4 = 18$

   (b) $x = 3$ or $x = -4$

   (c) $x = 5$ or $= -6$

   (d) $x = -3$ or $x = 4$

3. If $(x-3)(x+2) = 14$, then

   (a) $x - 3 = 14$ or $x + 2 = 14$

   (b) $x = 3$ or $x = -2$

   (c) $x = 5$ or $= -4$

   (d) $x = 4$ or $x = -5$

4. True or False: When solving the equation $(x+6)(x-3) = 0$ we can say either $x+6 = 0$ or $x - 3 = 0$.

   (a) True, and I am very confident

   (b) True, but I am not very confident

   (c) False, but I am not very confident

   (d) False, and I am very confident

5. True or False: When solving the equation $(x+6)(x-3) = 5$ we can say either $x+6 = 5$ or $x - 3 = 5$.

   (a) True, and I am very confident

   (b) True, but I am not very confident

   (c) False, but I am not very confident

   (d) False, and I am very confident

6. Solve by factoring: $5x^2 - 8x = 2x^2 + 16$

   (a) $x = 24$ or $\dfrac{16}{3}$

   (b) $x = 8$ or $\dfrac{16}{3}$

   (c) $x = 4$ or $-\dfrac{4}{3}$

   (d) $x = -4$ or $\dfrac{4}{3}$

7. Solve $x^3 + 2x^2 - 9x - 18 = 0$.

   (a) $x = 18$, $x = -1 \pm \sqrt{10}$

   (b) $x = 3$, $x = -3$, $x = -2$

   (c) $x = -2$

   (d) There is no solution.