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 \(x = -6\)
   (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 \(x = -4\)
   (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 \(\frac{16}{3}\)
(b) \(x = 8\) or \(\frac{16}{3}\)
(c) \(x = 4\) or \(-\frac{4}{3}\)
(d) \(x = -4\) or \(\frac{4}{3}\)

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.