Classroom Voting Questions: Algebra

Section 6.2: Factoring Trinomials of the Form $x^2 + bx + c$

1. What two integers c_1 and c_2 have a product of 12 and a sum of -7?

   (a) $c_1 = -2$ and $c_2 = -6$
   (b) $c_1 = 3$ and $c_2 = -4$
   (c) Integers not listed here
   (d) There are no such integers.

2. Factor: $x^2 - 7x + 12$

   (a) $(x + 3)(x + 4)$
   (b) $(x - 3)(x - 4)$
   (c) $(x + 6)(x + 2)$
   (d) $(x - 6)(x - 2)$
   (e) This cannot be factored.

3. What two integers c_1 and c_2 have a product of -11 and a sum of 10?

   (a) $c_1 = -11$ and $c_2 = -1$
   (b) $c_1 = 11$ and $c_2 = -1$
   (c) Integers not listed here
   (d) There are no such integers.

4. Factor: $x^2 + 10x - 11$

   (a) $(x + 1)(x - 11)$
   (b) $(x + 1)(x + 11)$
   (c) $(x - 1)(x - 11)$
   (d) $(x - 1)(x + 11)$
   (e) This cannot be factored.

5. What two integers c_1 and c_2 have a product of 24 and a sum of -10?

   (a) $c_1 = 6$ and $c_2 = 4$
   (b) $c_1 = -12$ and $c_2 = 2$
   (c) Integers not listed here
   (d) There are no such integers.

6. Factor: $x^2 - 10x + 24$

   (a) $(x + 2)(x + 12)$
   (b) $(x - 2)(x - 12)$
   (c) $(x + 6)(x + 4)$
   (d) $(x - 6)(x - 4)$
   (e) This cannot be factored.

7. What two integers c_1 and c_2 have a product of 12 and a sum of -11?

   (a) $c_1 = -12$ and $c_2 = 1$
   (b) $c_1 = -12$ and $c_2 = -1$
   (c) Integers not listed here
   (d) There are no such integers.

8. Factor: $x^2 - 11x + 12$

   (a) $(x + 12)(x + 1)$
   (b) $(x + 12)(x - 1)$
   (c) $(x - 12)(x + 1)$
   (d) $(x - 12)(x - 1)$
   (e) This cannot be factored.