Independent Practice **Expressions and Operations**
A.12, A.14

Read and solve.

1. Which is the complete factorization of the trinomial $x^2 - x - 12$?

   A. $(x + 3)(x - 4)$
   B. $(x - 3)(x + 4)$
   C. $(x + 6)(x - 2)$
   D. $(x + 12)(x - 1)$

2. Which is the complete factorization of the trinomial $3x^2 + 10x - 8$?

   A. $(3x + 2)(x - 4)$
   B. $(x + 2)(3x - 4)$
   C. $(x - 2)(3x + 4)$
   D. $(3x - 2)(x + 4)$

3. The number of seconds to complete a chemical reaction was determined to be given by the equation $s = 250 - 5T - T^2$ where s is the number of seconds and T is the temperature in degrees Celsius at which the reaction occurred. If a chemical reaction was complete in 200 seconds, what was the temperature at which the reaction occurred?

   A. 5° C
   B. 7° C
   C. 10° C
   D. 12° C

4. Which is the solution set for the following equation: $x^2 - x - 6 = 0$?

   A. {-3, 2}
   B. {-2, 3}
   C. {-6, 5}
   D. {-5, 6}

5. When completely factored, $3x^2 - 48$ equals

   A. $3(x^2 - 48)$
   B. $3(x^2 + 16)$
   C. $3(x - 4)(x + 4)$
   D. $(3x - 16)(x + 3)$

Independent Practice--continued

6. When completely factored, $x^2 + x - 12$ is equivalent to---

   A. $(x + 3)(x - 4)$
   B. $(x + 4)(x - 3)$
   C. $(x + 7)(x - 5)$
   D. $(x + 12)(x - 1)$

7. One factor of $5x^2 + 13x - 6$ is---

   A. $5x - 6$
   B. $5x - 1$
   C. $5x - 2$
   D. $5x - 3$

8. Which is the solution set for the equation $x^2 - 8x + 16 = 0$?

   A. {2, -6}
   B. {4, -4}
   C. {4}
   D. {-9, 2}

9. Which is the solution set for the equation $x^2 + 5x - 6 = 0$?

   A. {1, -6}
   B. {-1, 6}
   C. {2, -3}
   D. {-2, 3}

10. Which is the solution set for the equation $3x^2 + 7x - 6 = 0$?

   A. {-2/3, 3}
   B. {2/3, -3}
   C. {1, -6}
   D. {-1, 6}