1. Which of the following expressions is equivalent to and the completely factored form of the quadratic $5a^2 + 10a - 40$?
   a. $(5a - 8)(a + 5)$
   b. $(5a - 10)(a + 4)$
   c. $(5a - 2)(a + 4)$
   d. $(5a + 10)(a - 4)$

2. Which of the following expressions is a factor of the completely factored form of the quadratic $2a^2 + a - 15$?
   a. $2a + 5$
   b. $a - 3$
   c. $2a + 3$
   d. $a + 3$

3. Solve the following quadratic equation by factoring: $0 = 6x^2 - x - 2$

4. Which of the following quadratic equations is solved correctly?
   a. $x^2 - 7x - 60 = 0$
     $x = -12, x = 5$
   b. $x^2 - 11x + 24 = 0$
     $x = 8, x = 3$
   c. $x^2 - 8x + 16 = 0$
     $x = -4, x = 4$
   d. $x^2 + 6x - 40 = 0$
     $x = -4, x = 10$

5. Tina is trying to factor quadratic expressions but keeps messing up (These aren't factored all the way). The following problems contain an error. Circle the mistake and fix the problem.
   What advice would you give Tina based on her mistakes?
   a. $5a^3 + 10a^2 - 240a$
     $5(a^3 + 2a^2 - 48a)$
     $5(a^3 - 6a^2 + 8a^2 - 48a)$
     $5(a^2(a - 6) + 8a(a - 6))$
     $5(a^2 + 8a)(a - 6)$
   b. $12x^2 + 6x - 90$
     $3(4x^2 + 2x - 30)$
     $3(4x^2 + 12x - 10x - 30)$
     $3(4x(x + 3) - 10(x + 3))$
     $3(4x - 10)(x + 3)$

Advice:

6. Find the solution(s) to the equation $3m^2 - 5 = 70$ by taking square roots.
   a. $\{-75, 75\}$
   b. $\{-\sqrt{70}, \sqrt{70}\}$
   c. $\{-5, 5\}$
   d. $\{25\}$

7. Find the value of $c$ that makes the expression $x^2 - 20x + c$ a perfect square trinomial.
   a. 400
c. 25
b. $-25$
d. 100
8. Leanne correctly solved the equation \( x^2 + 10x = 24 \) by completing the square. Which equation is part of her solution process?
   a. \((x + 10)^2 = 34\)  
   b. \((x + 10)^2 = 49\)  
   c. \((x + 5)^2 = 49\)  
   d. \((x + 5)^2 = 1\)

9. What is the solution set for the equation \((x - 7)^2 = 1\)?
   a. \{-8,8\}  
   b. \{8\}  
   c. \{-6,8\}  
   d. \{6,8\}

10. Solve the following quadratic equation by using the quadratic formula: \(5x^2 - 14x = -8\)

11. What is the sum of the solutions to the quadratic equation \(4x^2 - 3x - 10 = 0\)?
   a. -4.5  
   b. -0.75  
   c. 0.75  
   d. 3.25

12. Find the value of \(x\) that would make the diagram below accurate.

13. The length of a PICTURE EXCLUDING ITS FRAME is 10 inches, and the width of the PICTURE EXCLUDING ITS FRAME is 8 inches. Suppose the frame creates a border measuring \(x\) units across. If the entire area of the PICTURE INCLUDING ITS FRAME totals 120 square inches find \(x\).