**Solve the equation by factoring.**

1. 6x2 + x – 12 = 0 2. 15x2 – 12 = -8x 3. 2x(4x + 15) = 27

 4. 75x2 + 35x – 10 = 0 5. 12x2 + 60x + 75 = 0 6. 4x2 – 72x + 324 = 0

 7. $\frac{2x}{x+3}+ \frac{5}{x}-4= \frac{18}{x^{2}+3x}$ 8. $\frac{5x}{x-3}+ \frac{4}{x+3}= \frac{90}{x^{2}-9}$ 9. $\frac{3x}{x-2}+ \frac{1}{x+2}= \frac{-4}{x^{2}-4}$

 **Determine whether the two equations are equivalent.**

15. (a) x2 = 16, x = 4 (b) x = $\sqrt{9}$, x = 3

 **Solve.**

16. x2 = 169 17. 25x2 = 9 18. (x-3)2 = 17 19. 4(x+2)2 = 11