Name _____ Date _____

Section 7.5 A and B

In Exercises 1–3, solve the equation by cross multiplying. Check your solution(s).

1. $\frac{3}{4x} = \frac{1}{x - 2}$

2. $\frac{4}{x + 2} = \frac{6}{x - 2}$

3. $\frac{-3}{x + 1} = \frac{x - 5}{x - 5}$

4. So far in baseball practice, you have pitched 47 strikes out of 61 pitches. Solve the equation $\frac{80}{100} = \frac{47 + x}{61 + x}$ to find the number x of consecutive strikes you need to pitch to raise your strike percentage to 80%.

Solve the equation by using the LCD. Check your solution(s).

5. $\frac{4}{3} + \frac{2}{x} = 4$

6. $\frac{5}{2x} + \frac{1}{4} = \frac{9}{2x}$

7. $\frac{x - 2}{x - 3} + 3 = \frac{2x}{x}$

8. $\frac{4}{x - 5} + \frac{1}{x} = \frac{x - 1}{x - 5}$

9. $\frac{8}{x} + 3 = \frac{x + 8}{x - 4}$

10. $\frac{12}{x^2 - 2x} - \frac{3}{x - 2} = \frac{3}{x}$

11. You can clean the gutters of your house in 5 hours. Working together, you and your friend can clean the gutters in 3 hours. Let t be the time (in hours) your friend would take to clean the gutters when working alone. Write and solve an equation to find how long your friend would take to clean the gutters when working alone.

$\left(\textit{Hint:}\ \left(\text{Work done}\right) = \left(\text{Work rate}\right) \times \left(\text{Time}\right)\right)$

12. $\dfrac{2}{x-4} = \dfrac{x-3}{x-1}$

13. $\dfrac{x-5}{4} = \dfrac{x^2-5}{x+4}$

Solve the equation by using the LCD. Check your solution(s).

14. $\dfrac{5}{x-6} + \dfrac{1}{x} = \dfrac{x-1}{x-6}$

15. $\dfrac{x-4}{x-5} + 5 = \dfrac{4x}{x}$

16. $\dfrac{16}{x^2-4x} - \dfrac{8}{x-4} = \dfrac{4}{x}$

17. You can kayak around a certain island in 3 hours. Kayaking together, you and your friend can kayak around the island in 1.4 hours. Let t be the time (in hours) your friend would take to kayak around the island when kayaking alone. Write and solve an equation to find how long your friend would take to kayak around the island when kayaking alone.

$\left(\textit{Hint:}\ \left(\text{Work done}\right) = \left(\text{Work rate}\right) \times \left(\text{Time}\right)\right)$