

**1.4 Rational Equations WS 2**

Name \_\_\_\_\_

**Solve the rational equation, be sure to check your solutions.**

1. 
$$\frac{4}{x+3} + \frac{5}{6} = \frac{23}{18}$$

2. 
$$\frac{2}{x+1} - \frac{1}{x-1} = \frac{-2}{x^2-1}$$

3. 
$$\frac{-4x}{x-1} + \frac{4}{x+1} = \frac{-8}{x^2-1}$$

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

5. 
$$\frac{7}{12} + \frac{9}{x-4} = \frac{55}{48}$$

6. 
$$\frac{1}{x-2} + \frac{2x+1}{x^2+2x-8} = \frac{2}{x+4}$$

**Solve the polynomial equation.**

7.  $3x^4 + 8x^2 - 3 = 0$

8.  $2x^3 - 4x^2 - 3x = -6$

9.  $2x^2 + 21x + 27 = 0$

10.  $x^{2/3} - 6x^{1/3} - 16 = 0$

11.  $x^3 - 27 = 0$

12.  $4x^{2/3} - 9 = 9x^{1/3}$