

1.4 Rational Equations WS

Name KEY

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

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

$$X=4$$

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

$$X = 1 \pm \sqrt{7}$$

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

$$X=2$$

4. $\frac{2}{3x} + \frac{1}{6} = \frac{9}{x}$

$$X=50$$

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

$$X = \frac{7}{2}$$

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

$$X=1$$

$$7. \frac{-2}{x-1} = \frac{x-8}{x+1}$$

$$X = 2, 5$$

$$8. \frac{18}{x^2-3x} - \frac{6}{x-3} = \frac{5}{x}$$

No Solution

$$9. \frac{x+3}{x-3} + \frac{x}{x-5} = \frac{x+5}{x-5}$$

$$X = 0, 7$$

Solve the polynomial equation.

$$10. x^3 - 4x^2 - 9x + 36 = 0$$

$$X = \pm 3, 4$$

$$11. 8x^3 + 1 = 0$$

$$X = \frac{-1}{2}, \frac{1 \pm i\sqrt{3}}{4}$$

$$12. 6x^2 - 8 = 8x$$

$$X = 2, -\frac{2}{3}$$