

#9 Add/ Rational Expressions & Solving

Date _____ Period _____

Simplify each expression.

1) $\frac{a-2}{6a-24} + \frac{2a+1}{6a-24}$

2) $\frac{x-4}{6x-2} - \frac{6}{6x-2}$

3) $\frac{6}{2x} + \frac{6x}{2}$

4) $\frac{5v}{6v^3} + \frac{5u}{2v}$

5) $\frac{x-5}{x-3} + \frac{5x}{5}$

6) $\frac{5}{3a-5} + \frac{3}{a-4}$

7) $\frac{5v}{3v+2} + \frac{6v}{5v^2+15v}$

8) $2n + \frac{n+3}{n^2+5n+4}$

Solve each equation. Remember to check for extraneous solutions.

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

10) $\frac{4}{5x} = \frac{1}{5x} + \frac{2x-12}{5x^2}$

$$11) \frac{6}{x+6} = 1 + \frac{1}{x+6}$$

$$12) \frac{5}{4p} = \frac{1}{4p} + 1$$

$$13) \sqrt{43-2k} = \sqrt{k-8}$$

$$14) \sqrt{11x-1} = \sqrt{10x}$$

$$15) \sqrt{2n-15} = \sqrt{25-2n}$$

$$16) -81 = -9\sqrt{2b+75}$$

$$17. x - 3\sqrt{x} - 4 = 0$$

$$18. x - 11\sqrt{x} + 30 = 0$$

$$19. (2x-1)^2 - 5(2x-1) + 4 = 0$$

$$20. 2(x^2-4)^2 + 5(x^2-4) - 3 = 0$$