

## SM3-A HW #12-7 (Add, Subtract, Multiply, Divide Rational Expressions)

**Simplify each expression.**

1)  $\frac{3}{n-2} + \frac{5}{n+5}$

2)  $\frac{5b}{b+5} + \frac{2b}{b-3}$

3)  $\frac{x-6}{3x+15} - \frac{3x}{2}$

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

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

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

7)  $\frac{5x}{3x^2} - \frac{4x}{2x^2}$

8)  $\frac{6n}{5n^3} - \frac{2n}{2}$

9)  $\frac{7v}{7v(v+5)} \cdot \frac{(v-8)(v+5)}{10}$

10)  $\frac{(a-1)(a-9)}{a+5} \cdot \frac{a+5}{5(a-9)}$

$$11) \frac{x^2 + 2x - 24}{3x^2 + 18x} \cdot \frac{3x}{x - 4}$$

$$12) \frac{8n^2}{10n - 40} \cdot \frac{10n - 30}{n - 3}$$

$$13) \frac{6n(n - 5)}{n + 3} \div \frac{6n(n - 5)}{6n}$$

$$14) \frac{2(x - 3)}{(x - 3)(x - 6)} \div \frac{2}{6(x - 6)}$$

$$15) \frac{6r - 18}{r - 1} \div \frac{r - 3}{r - 1}$$

$$16) \frac{a - 6}{56a + 8} \div \frac{8}{56a + 8}$$