

SM3-A HW #12-6 (Add, Subtract, Multiply, Divide Rational Expressions)

Simplify each expression.

1) $\frac{6}{n-5} + \frac{2}{n-6}$

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

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

4) $\frac{5r}{r-1} - \frac{4r}{3r+5}$

5) $\frac{5}{2xy} + \frac{2x}{5xy^2}$

6) $\frac{4}{6y^2} + \frac{x-5y}{4x^2}$

7) $\frac{u+4v}{5} - \frac{6u}{5v}$

8) $\frac{2x}{3} - \frac{2x}{4x}$

9) $\frac{(n+4)(n+10)}{n+10} \cdot \frac{5n^2}{10(n+4)}$

10) $\frac{p-9}{p+7} \cdot \frac{(p+2)(p+7)}{(9-p)(7+p)}$

$$11) \frac{b^2 - 14b + 49}{b - 7} \cdot \frac{b - 9}{b - 7}$$

$$12) \frac{63k - 14k^2}{7k} \cdot \frac{k - 9}{18k^2 - 81k}$$

$$13) \frac{6k}{(4 - k)(7 + k)} \div \frac{k - 5}{(k - 5)(k - 4)}$$

$$14) \frac{7v^2(v + 2)}{7v^2} \div \frac{7}{7(v - 7)}$$

$$15) \frac{n + 5}{n^2 - 13n + 40} \div \frac{n + 6}{n^2 - 13n + 40}$$

$$16) \frac{4}{4n + 12} \div \frac{1}{10n^2}$$