

HW #1: Rational Expressions

Simplify each and state the excluded values.

1) $\frac{x^2 - 3x - 28}{x + 4}$

2) $\frac{k + 2}{9k + 18}$

3) $\frac{x^2 - 6x + 8}{x^2 - 11x + 18}$

4) $\frac{r^2 - 18r + 80}{10r - 100}$

5) $\frac{n^2 - 64}{n^2 - 6n - 16}$

6) $\frac{v^2 + 4v - 60}{v^2 + 2v - 80}$

7) $\frac{25x - 20}{3} \cdot \frac{6x}{25x - 20}$

8) $\frac{v + 4}{v^2 - 4v - 32} \cdot \frac{v + 3}{v - 9}$

$$9) \frac{x^2 - 12x + 32}{x + 6} \cdot \frac{x + 6}{x^2 - 17x + 72}$$

$$10) \frac{1}{x - 7} \cdot \frac{5x^3 - 35x^2}{6}$$

$$11) \frac{5n + 20}{5n - 15} \cdot \frac{n - 3}{n - 1}$$

$$12) \frac{1}{10n + 14} \cdot \frac{10n + 14}{n - 10}$$

$$13) \frac{1}{p + 1} \div \frac{p + 1}{8p + 8}$$

$$14) \frac{10}{a^2 + 8a - 20} \div \frac{3a}{3a^2 - 6a}$$

$$15) \frac{p + 5}{p^2 - 3p - 40} \div \frac{1}{40 + 3p - p^2}$$

$$16) \frac{9a + 24}{6} \div \frac{24a^2 + 64a}{8a}$$

$$17) \frac{1}{20m^2 - 10m^3} \div \frac{10m^2}{m^2 + m - 6}$$

$$18) \frac{x - 2}{x + 5} \div \frac{x + 2}{x^2 + 7x + 10}$$