

## Multiplying and Dividing Rational Expressions

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify each expression.**

1)  $\frac{8}{7} \cdot \frac{3n^3}{10}$

2)  $\frac{7n^3}{6} \cdot \frac{9}{6}$

3)  $\frac{6n}{3} \cdot \frac{6}{9n^2}$

4)  $\frac{7}{7v} \div \frac{6v}{10}$

5)  $\frac{3}{2n^2} \div \frac{2}{10n^3}$

6)  $\frac{5p}{10p} \div \frac{4p}{2p^2}$

7)  $\frac{6(3v-10)}{2v} \cdot \frac{1}{10(3v-10)}$

8)  $\frac{n+6}{8n^2(n+6)} \cdot \frac{(n-4)(n-10)}{n-10}$

$$9) \frac{(p+3)(p-10)}{6} \cdot \frac{1}{9p(p-10)}$$

$$10) \frac{x+7}{(x+8)(x+7)} \div \frac{x+10}{6(x+8)}$$

$$11) \frac{9(n-4)}{(n+8)(n-8)} \div \frac{n-4}{(n+8)(n-8)}$$

$$12) \frac{m-5}{m-4} \div \frac{6(m-10)}{(m-10)(m-4)}$$

$$13) \frac{1}{n-6} \cdot \frac{n^2+7n-18}{n+9}$$

$$14) \frac{1}{a-3} \cdot \frac{a^2+6a-27}{a+8}$$

$$15) \frac{3p^2+15p}{2} \cdot \frac{1}{p+5}$$

$$16) \frac{n+5}{n^2-18n+80} \div \frac{7n^2}{7n^3-70n^2}$$

$$17) \frac{7}{a-7} \div \frac{7}{56a-8a^2}$$

$$18) \frac{6v^2}{v+3} \div \frac{v-1}{v^2+2v-3}$$