

Multiplying Rational Expressions

Date _____ Period _____

Simplify each expression.

1) $\frac{5}{5x(x+3)} \cdot 5x(x+3)$

2) $\frac{2(x-10)}{2(3x+1)} \cdot \frac{9(3x+1)}{x-10}$

3) $\frac{(x-4)(x-1)}{10x^2} \cdot \frac{10x^2}{5(x-1)}$

4) $\frac{15x^2(x-2)}{3x^2} \cdot \frac{10}{15x(x-2)}$

5) $\frac{1}{v+1} \cdot \frac{6v-54}{v-9}$

6) $\frac{8}{8a+24} \cdot \frac{a^2+9a+18}{2}$

$$7) \frac{2n^3 + 12n^2}{4} \cdot \frac{4}{8n}$$

$$8) \frac{x+10}{x+5} \cdot \frac{x-1}{-x^2+10x-9}$$

$$9) \frac{a-2}{2a^2-4a} \cdot \frac{8a-12}{8a^3-12a^2}$$

$$10) \frac{x+2}{3x^3+9x^2} \cdot \frac{5x^2-25x}{x^2-3x-10}$$

$$11) \frac{12a-8}{6a-10} \cdot \frac{12a-20}{3a-2}$$

$$12) \frac{25x^2-15x}{x+5} \cdot \frac{5x-15}{25x-15}$$

$$13) \frac{8r^2-4r}{3r^2+12r+9} \cdot \frac{15r^3+15r^2}{2r-1}$$

$$14) \frac{2n^2-8n-10}{4n-6} \cdot \frac{15-7n-2n^2}{2n+2}$$