Mastery Algebra 1 Sample Mastery Quiz 11-2 Name: KEY

Per: ____ ☐

11-2 Multiplying Rational Expressions

Multiply and simplify:

1. $\frac{4a^3b}{3a^2b^2} \cdot \frac{9ab}{8} = \frac{3a^2}{2}$

$\frac{2 \cdot 2 \cdot a \cdot a \cdot a \cdot b \cdot 3 \cdot 3 \cdot a \cdot b}{3 \cdot a \cdot a \cdot b \cdot b \cdot 2 \cdot 2 \cdot 2}$

2. $\frac{n+3}{3n} \cdot \frac{6n^2}{n^2+n-6} = \frac{(n+3) \cdot 2 \cdot 3 \cdot n \cdot n}{3 \cdot n (n+3)(n-2)}$

$= \frac{2n}{n-2}$

3. $\frac{4x+4}{5x+10} \cdot \frac{30x+60}{2x-2}$

$= \frac{4(x+1)}{5(x+2)} \cdot \frac{30(x+2)}{2(x-1)}$

$= \frac{2 \cdot 2 (x+1)}{1(x+2)} \cdot \frac{2 \cdot 3 \cdot 5 (x+2)}{1(x-1)}$

$= \frac{12(x+1)}{x-1}$

4. $\frac{2y+9}{4y+12} \cdot (y^2+y-6)$

$= \frac{(2y+9)}{4(y+3)} \cdot \frac{(y+3)(y-2)}{1}$

$= \frac{(2y+9)(y-2)}{4}$

5. $\frac{x^2-6x+8}{x^2-x-2} \cdot \frac{2x-4}{x-4} = \frac{(x-2)(x-4)}{(x-2)(x+1)} \cdot \frac{2(x-2)}{(x-4)} = \frac{2(x-2)}{x+1}$

Sorry, 2(x-2) on top!