Mastery Algebra 1 Sample Mastery Quiz 11-4 Name: KEY

Per: ____

11-4 Adding & Subtracting Rational Expressions

Add or subtract and simplify:

1. $\frac{9}{2y+4} - \frac{5}{2y+4} = \frac{4}{2y+4}$

$\frac{\cancel{2}\cdot 2}{\cancel{2}(y+2)} = \boxed{\frac{2}{y+2}}$

(2)

2. $\frac{4b\cdot 4}{4b\cdot 6b^2} + \frac{5\cdot 3}{8b^3\cdot 3} = \frac{16b}{24b^3} + \frac{15}{24b^3}$

$6b^2 = 2\cdot 3\cdot b\cdot b$

$8b^3 = 2\cdot 2\cdot 2\cdot b\cdot b\cdot b$

$LCD = 2\cdot 2\cdot 2\cdot 3\cdot b\cdot b\cdot b$

$= 24b^3$

$= \boxed{\frac{16b+15}{24b^3}}$

(2)

3. $\frac{(x-3)x}{(x-3)(x+3)} - \frac{2}{x^2-9}$ $(x+3)(x-3)$

-9, 3, -3, 0

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

$= \boxed{\frac{x^2-3x-2}{(x+3)(x-3)}}$

(3)

4. $\frac{(y+1)4}{(y+1)(y-1)} - \frac{3(y-1)}{(y+1)(y-1)}$

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

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

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

$= \boxed{\frac{y+7}{(y+1)(y-1)}}$ or $\frac{y+7}{y^2-1}$

(3)