Math 2 Name_____

Unit 5.4 Add and Subtract Rational Expressions Practice

Period____

Simplify each expression.

1) $\frac{m-n}{36n^3} - \frac{m-6n}{36n^3}$

$\frac{5}{36n^2}$

2) $\frac{x+2y}{15x^2} + \frac{x-y}{15x^2}$

$\frac{2x+y}{15x^2}$

3) $\frac{4}{3} - \frac{3x}{2xy}$

$\frac{8y-9}{6y}$

4) $\frac{3n}{6m} + \frac{3m}{2n}$

$\frac{n^2+3m^2}{2mn}$

5) $\frac{4x-6}{(x-2)(3x+2)} + \frac{6}{(x-2)(3x+2)}$

$\frac{4x}{(x-2)(3x+2)}$

6) $\frac{x+6}{3(x+5)(x-2)} + \frac{x+6}{3(x+5)(x-2)}$

$\frac{2(x+6)}{3(x+5)(x-2)}$

7) $\frac{2}{4x} - \frac{6x}{x-2}$

$\frac{-12x^2+x-2}{2x(x-2)}$

8) $\frac{2x}{3(x+1)} - \frac{6x}{3}$

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

9) $\frac{5}{v-5} + \frac{2}{2(v+3)}$

$\frac{2(3v+5)}{(v-5)(v+3)}$

10) $\frac{3}{r-6} + \frac{6r}{r+1}$

$\frac{3(2r^2-11r+1)}{(r-6)(r+1)}$

11) $\dfrac{5}{5n-4} - \dfrac{3}{n-5}$

$\dfrac{-10n-13}{(n-5)(5n-4)}$

12) $\dfrac{4n}{n-5} + \dfrac{6}{n+4}$

$\dfrac{2(2n^2+11n-15)}{(n-5)(n+4)}$

13) $\dfrac{2}{5k-3} + \dfrac{5}{k-4}$

$\dfrac{27k-23}{(k-4)(5k-3)}$

14) $\dfrac{2}{2(2n+3)(n+4)} + \dfrac{2}{3}$

$\dfrac{4n^2+22n+27}{3(n+4)(2n+3)}$

15) $\dfrac{2}{x-1} - \dfrac{2}{4(x-5)}$

$\dfrac{3x-19}{2(x-5)(x-1)}$

16) $\dfrac{4}{(3m+5)(m-3)} + \dfrac{3}{4m^2}$

$\dfrac{25m^2-12m-45}{4m^2(m-3)(3m+5)}$

17) $\dfrac{2}{5a^2+15a} - \dfrac{2a}{a-6}$

$-\dfrac{2(5a^3+15a^2-a+6)}{5a(a-6)(a+3)}$

18) $3 + \dfrac{3}{3n^2-20n+12}$

$\dfrac{3(3n^2-20n+13)}{(n-6)(3n-2)}$

19) $\dfrac{6}{x-3} - \dfrac{6x}{x-2}$

$\dfrac{6(-x^2+4x-2)}{(x-3)(x-2)}$

20) $\dfrac{3}{r-6} + \dfrac{6r}{r-1}$

$\dfrac{3(2r^2-11r-1)}{(r-6)(r-1)}$

21) $\dfrac{6}{a+2} - \dfrac{4a}{5a^2+25a}$

$\dfrac{2(13a+71)}{5(a+5)(a+2)}$

22) $\dfrac{v+6}{v+4} + \dfrac{2v}{v-1}$

$\dfrac{3v^2+13v-6}{(v-1)(v+4)}$