Math-3A Name_____ ID: 1

SM3-A HW #4-4 (Practice)

Date_____ Period____

Simplify each expression.

1) $\frac{m+3n}{16m^5}+\frac{3m}{16m^5}$

2) $\frac{x+y}{18y^2}+\frac{5}{18y^2}$

3) $\frac{5x-y}{20x}+\frac{5x+2y}{20x}$

4) $\frac{m-4n}{30m^3n^2}+\frac{5m-n}{30m^3n^2}$

Simplify each and state the excluded values.

5) $\frac{30b^2+40b-40}{20b-30}$

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

Simplify each expression.

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

8) $\frac{5}{x-4}-\frac{3}{6x}$

9) $\frac{2}{r+6} + \frac{6r}{r+2}$

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

11) a) Divide the following polynomial by $(x^2 - 5)$ using LONG DIVISION. Show all your work.

$y = 3x^3 - 4x^2 + 5x - 6$

Factor, then simplify.

12) $\frac{4a-8}{a-2} \cdot \frac{1}{a+1}$

13) $\frac{k+2}{8k-64} \cdot \frac{k^2-64}{k+2}$

14) $\frac{8a^2(a-8)}{16a^2(a-4)} \div \frac{6a^2}{12a^2(a-4)}$

15) $\frac{1}{k^2-2k-48} \div \frac{k-7}{k^2-5k-24}$