Secondary Math 3   Name_____

9-1 Multiplying and Dividing Rationals   Date_____ Period_____

Simplify each and state the excluded values.

1) $\dfrac{5(n-3)}{(n+1)(n-3)} \div (n-5)$

2) $\dfrac{2(3r+5)}{7(3r+5)} \cdot \dfrac{(r-5)(r+2)}{r+2}$

3) $\dfrac{(v-7)(v+4)}{(v+4)(v+5)} \cdot \dfrac{3v^2(v+5)}{3v^2}$

4) $\dfrac{5n^2}{(n-5)(n+8)} \div \dfrac{1}{(n-5)(n+8)}$

5) $\dfrac{p^2-3p+2}{p-2} \div (p-1)$

6) $\dfrac{4a+8}{4} \div \dfrac{a+2}{4}$

7) $\dfrac{x-1}{6} \div \dfrac{7x-7}{7x+42}$

8) $\dfrac{4a}{a^2+6a+5} \div \dfrac{1}{a^2+6a+5}$

9) $\dfrac{6x^3 - 6x^2}{7} \div \dfrac{6x^3 - 6x^2}{x + 3}$

10) $\dfrac{12x + 30}{8x + 20} \div \dfrac{6}{7x^2}$

11) $\dfrac{b + 3}{b + 5} \cdot \dfrac{b + 5}{b^2 + 15b + 56}$

12) $\dfrac{6 + n - n^2}{n - 3} \div \dfrac{n - 4}{4 - n}$

13) $\dfrac{v^2 + 9v + 18}{3v} \cdot \dfrac{1}{v + 6}$

14) $\dfrac{v + 3}{36v} \cdot \dfrac{5}{v + 3}$

15) $\dfrac{1}{x - 7} \cdot \dfrac{x^2 - 11x + 24}{x - 3}$

16) $\dfrac{m^2 + 2m - 3}{m + 7} \div \dfrac{3 - 2m - m^2}{m + 8}$