Name_____

6.1 Simplify, Multipy, Divide Rational Expressions

Period____

Simplify. State the excluded values.

1) $\dfrac{49x^3}{14x}$

2) $\dfrac{16v^5}{32v^2}$

3) $\dfrac{x-10}{2x-20}$

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

5) $\dfrac{8n-64}{n^2-6n-16}$

6) $\dfrac{x^2+2x+1}{x^2+7x+6}$

Multiply. State the excluded values.

7) $\dfrac{(x+10)^2}{35x} \cdot \dfrac{6x^2}{6x^2(x+10)}$

8) $\dfrac{9}{8(7v+10)} \cdot \dfrac{8(7v+10)}{3v^2}$

9) $\dfrac{4n}{n-3} \cdot \dfrac{(n-3)(n+9)}{4n(n+9)}$

10) $\dfrac{1}{4r^2} \cdot \dfrac{4r+18}{8r+36}$

11) $\dfrac{p+9}{4p} \cdot \dfrac{p^2+8p+16}{p+9}$

12) $\dfrac{a^2-11a+10}{4} \cdot \dfrac{a-8}{a^2-9a+8}$

Divide. State the excluded values.

13) $\dfrac{14(k+1)}{8} \div \dfrac{20(k+1)}{8(k+4)}$

14) $\dfrac{9(x+8)}{(x-1)(x-10)} \div \dfrac{9}{x-10}$

15) $\dfrac{2(a+2)}{5a^2(7a+3)} \div \dfrac{a+2}{5a^2(7a+3)}$

16) $\dfrac{6}{v-5} \div \dfrac{42v+48}{49v+56}$

17) $\dfrac{p-7}{3p^3+6p^2} \div \dfrac{1}{p+2}$

18) $\dfrac{b-5}{8b-72} \div \dfrac{1}{b-9}$