SECONDARY MATH III
RATIONAL EXPRESSIONS
WS 8.1 MULT/DIVIDING RATIONALS

NAME_____
DATE_____
CLASS_____

Simplify each expression.

1. $\frac{21x^3y}{14x^2y^2}$

2. $\frac{5ab^3}{25a^2b^2}$

3. $\frac{(x^6)^3}{(x^3)^4}$

4. $\frac{8y^2(y^6)^3}{4y^{24}}$

5. $\frac{18}{2x-6}$

6. $\frac{x^2-4}{(x-2)(x+1)}$

7. $\frac{3a^2-24a}{3a^2+12a}$

8. $\frac{3m}{2n} \cdot \frac{n^3}{6}$

9. $\frac{24e^3}{5f^2} \cdot \frac{10(ef)^3}{8e^5f}$

10. $\frac{5s^2}{s^2-4} \cdot \frac{s+2}{10s^5}$

11. $\frac{7g}{y^2} \div 21g^3$

12. $\frac{80y^4}{49z^5v^7} \div \frac{25y^5}{14z^{12}v^5}$

13. $\frac{3x^2}{x+2} \div \frac{3x}{x^2-4}$

14. $\frac{q^2+2q}{6q} \div \frac{q^2-4}{3q^2}$

15. $\frac{w^2-5w-24}{w+1} \cdot \frac{w^2-6w-7}{w+3}$

16. $\frac{t^2+19t+84}{4t-4} \cdot \frac{2t-2}{t^2+9t+14}$

17. $\frac{x^2-5x+4}{2x-8} \div (3x^2-3x)$

18. $\frac{16a^2+40a+25}{3a^2-10a-8} \div \frac{4a+5}{a^2-8a+16}$

19. $\frac{\frac{c^2}{2d^2}}{-\frac{c^6}{5d}}$

20. $\frac{\frac{a^2-b^2}{4a}}{\frac{a+b}{2a}}$