

## Center 3 - Multiply and Divide Monomials

Simplify. Express using exponents.

1.  $k^8 \cdot k$

2.  $t^7 \cdot t^6$

3.  $2w^2 \cdot 5w^2$

4.  $3e^3 \cdot 7e^3$

5.  $4r^4(-4r^3)$

6.  $(-3l^2w^3)(2lw^4)$

7.  $(-11w^4)(-5w^3x^4)$

8.  $(-4b^6)(-b^2c^3)$

9.  $(10t^4v^5)(3t^2v^5)$

10.  $\frac{5^9}{5^3}$

11.  $\frac{3^8}{3}$

12.  $\frac{b^6}{b^4}$

13.  $\frac{g^{15}}{g^7}$

14.  $\frac{18v^5}{9v}$

15.  $\frac{24a^6}{6a^5}$

16.  $y^6 \div y^3$

17.  $\frac{n^{19}}{n^{11}}$

18.  $\frac{95^{21}}{95^{18}}$

19. Simplify  $\frac{5^5 \cdot 6^3 \cdot 8^{10}}{5^3 \cdot 6 \cdot 8^9}$

20. **BONUSES** A company has set aside  $10^7$  dollars for annual employee bonuses. If the company has  $10^4$  employees and the money is divided equally among them, how much will each employee receive?

21. **CAR LOANS** After making a down payment, Mr. Valle will make  $6^2$  monthly payments of  $6^3$  dollars each to pay for his new car. What is the total of the monthly payments?