

1-3 Multiply and Divide Monomials Homework Practice

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?

Lesson 4 Homework Practice

Powers of Monomials

Simplify.

1. $(6t^5)^2$

2. $(4w^9)^4$

3. $(12k^6)^3$

4. $(15m^8)^3$

5. $(4d^3e^5)^7$

6. $(-4r^6s^{15})^4$

7. $[(7^2)^2]^2$

8. $[(3^2)^2]^3$

9. $(\frac{3}{5}a^6b^9)^2$

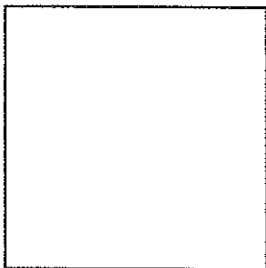
10. $(4x^2)^3(3x^6)^4$

11. $(0.6p^5)^3$

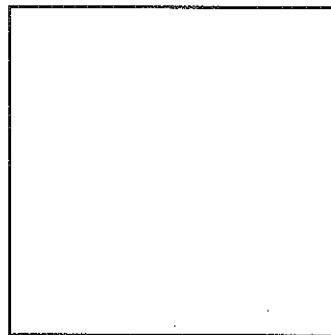
12. $(\frac{1}{5}w^5x^3)^2$

GEOMETRY Express the area of each square below as a monomial.

13.

 $9c^6d$

14.

 $14g^5h^9$

15. **MEASUREMENT** In the Metric System, you would need to have $(10^4)^2$ grams to equal 1 metric ton. Simplify this measurement by multiplying the exponents, then simplify by finding the actual number of grams needed to equal 1 metric ton.

16. **GAMING** A video-game designer is using the expression $6n^3$ in a program to determine points earned, where n is the game level. Simplify the expression for the n^2 level.