

Practice

Monomials*Simplify. Assume that no variable equals 0.*

1. $3n^2v^3 - n^2v^3 + 8v^3n^2$

2. $4r^6w^2 + 9r^2w^6 - r^6w^2$

3. $y^7 \cdot y^3 \cdot y^2$

4. $(n^6)^3$

5. $(2n)^4 + 2n^4$

6. $\frac{12m^8y^6}{-9my^4}$

7. $(4a^3c^2)^3(-3ac^4)^2$

8. $\left(\frac{3}{2}e^2f^4\right)^4\left(-\frac{4}{3}e^5f\right)^3\left(-\frac{1}{6}ef^5\right)$

9. $-5v^2(2r^3v^2)(rv^3) - (-r^2)(16r^2v^7)$

10. $(-n)^4(2xy^2n)^3 + (4xy^3n^2)^2(-3xn^3)$

11. $\frac{(3x^{-2}y^3)(5xy^{-6})}{(x^{-3})^4y^{-2}}$

12. $(m^4n^6)^4(m^3n^2p^5)^6$

13. $(3x^2y)(2xy^4) + (4xy^2)(3x^2y^3)$

14. $t^{-5}(t^2 - t^4 + 5t)$

15. $\frac{-20(m^2v)(-v)^3}{5(-v)^2(-m^4)}$

16. $\frac{x^{7y+1}}{x^{7y-5}}$

Evaluate. Express each answer in both scientific and decimal notation.

17. $(4.8 \times 10^2)(6.9 \times 10^4)$

18. $(3.7 \times 10^9)(8.7 \times 10^2)$

19. $\frac{4 \times 10^8}{1.6 \times 10^4}$

20. $\frac{2.7 \times 10^6}{9 \times 10^{10}}$