

Powers of Powers EXP3

Review-- Evaluate:

1. $(-4x^3)(-4x^3)$

2. $(8c^5)(-6c^{-2})(c^{-1})$

3. $(h^{-14})(h^{24})$

4. $-(k^{10})(k^2)(k^5)$

Write out in expanded form and then simplify:

5. $(m^4)^3$ _____ = _____

6. $(-4x^3)^2$ _____ = _____

7. $(-r^2t)^4$ _____ = _____

8. Write the rule for Power of a Power:

Evaluate. Use a calculator if needed:

9. $(t^2)^9 =$ _____

10. $(m^{-4})^{-2} =$ _____

11. $(d^{12})^4 =$ _____

12. $(3x^7)^2 =$ _____

13. $(-2g^5)^3 =$ _____

14. $(-f^{10})^4 =$ _____

15. $(5x^8)^4 =$ _____

16. $(-10y^{10})^5 =$ _____

Use what you know to solve these:

17. $(x^4y^7z^2)^6 =$ _____

18. $(a^{10}b^{12}c^5)^5 =$ _____

19. $[(x^4)^5]^3 =$ _____

20. $[(v^8w^{10})^3]^2 =$ _____

Powers of Powers EXPX3

Review-- Evaluate:

1. $-(4x^3)(4x^3) = \underline{\hspace{2cm}}$ 2. $(-8c^5)(6c^{-12})(-c) = \underline{\hspace{2cm}}$

Write out in expanded form and then simplify:

3. $(-4x^{-3})^3 \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4. $(-r^2t)^4 \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5. Write the rule for Power of a Power:

Evaluate.

6. $(\frac{1}{2}x^8)^4 = \underline{\hspace{2cm}}$ 7. $(-10y^{10})^5 = \underline{\hspace{2cm}}$

8. $(x^4y^7z^2)^6 = \underline{\hspace{2cm}}$ 9. $(a^{10}b^{12}c^5)^5 = \underline{\hspace{2cm}}$

10. $[(x^4)^5]^3 = \underline{\hspace{2cm}}$ 11. $[(v^8w^{10})^3]^2 = \underline{\hspace{2cm}}$

12. $(9b^4y)^2(-b^2)^3 = \underline{\hspace{2cm}}$ 13. $(-3a^2)^3(-ab^3)^2(-\frac{2}{3}b)^2 = \underline{\hspace{2cm}}$

14. $[(\frac{1}{4}a^3bc)^2]^3 = \underline{\hspace{2cm}}$ 15. $[(-x^4y^4)^3]^3 = \underline{\hspace{2cm}}$