

Powers of Monomials

For any number a and all integers m and n , $(a^m)^n = a^{mn}$

For any numbers a and b and all integers m and n , $(ab)^m = a^m b^m$

In English: _____

Simplify.

1. $(x^3)^2$	2. $(x^4)^2$	3. $(x^5)^3$
4. $(2x)^2$	5. $(-6x^3y)^2$	6. $(-4x^4)^2$
7. $(3a^2b)^3$	8. $(-9a^5b^4)^2$	9. $(2m^3n^2)^4$

10. $\left(-4a^2c^2d^3\right)^3$	11. $\left(\frac{2}{3}\right)^2$	12. $\left(\frac{c}{d}\right)^7$
13. $\left(\frac{x^4}{y^3}\right)^2$	14. $\left(\frac{2x^3}{3y}\right)^2$	15. $\left(-\frac{4m^4}{5n^2}\right)^3$
16. $\left(-2x\right)^2\left(3x^3\right)^2$	17. $\left(-x^3y^5\right)^3(xy)^4$	18. $\left(-3m^4n^2\right)^3(4mn)$
19. $5\left(x^2y\right)^5(-2x)$	20. $\left(5x^2y\right)^2\left(\frac{1}{5}xy\right)$	21. $-2(-2mn)^3(-mn)^2$