



Power properties 1

Product of powers of the same base

Keep the base and **add** the exponents: $3^4 \cdot 3^6 = 3^{10}$

a. $2^4 \cdot 2^5 = 2^9$

b. $3^4 \cdot 3^2 \cdot 3^3 = 3^9$

c. $5^4 \cdot 5 = 5^5$

d. $6^2 \cdot 6^6 \cdot 6 = 6^9$

e. $10^5 \cdot 10^6 = 10^{10}$

f. $x^5 \cdot x^4 = x^9$

g. $a \cdot a = a^2$

h. $m \cdot m^6 \cdot m^3 = m^{10}$

i. $z^3 \cdot z^2 = z^5$

j. $(b^3 \cdot b^6) \cdot b^3 = b^{12}$

Division of powers of the same base

Keep the base and **subtract** the exponents: $3^6 : 3^4 = 3^2$

a. $2^7 : 2^5 = 2^2$

b. $(3^{14} : 3^2) : 3^3 = 3^9$

c. $5^4 : 5 = 5^3$

d. $6^{12} : 6^6 = 6^6$

e. $10^7 : 10^6 = 10$

f. $x^5 : x^4 = x$

g. $a^7 : a = a^6$

h. $(m^9 : m^4) : m^3 = m^2$

i. $z^9 : z^2 = z^7$

j. $(b^{13} : b^6) : b^3 = b^4$

