Laws of Indices

Simplify:

(a) $4^5 \times 4^2$ (b) $4^5 \times 4^3$

(c) $4^3 \times 4^5$ (d) 4×4^5

(e) $4^5 \times 4^{-2}$ (f) $4^0 \times 4^3$

(g) $4^{2.5} \times 4^{0.5}$ (h) $4^5 \times 5^2$

(i) $5^{-3} \times 5^2$ (j) $5^{-5} \times 5^{-3}$

Simplify:

(a) $4^5 \div 4^2$ (b) $4^5 \div 4^3$

(c) $4^2 \div 4^5$ (d) $4^5 \div 4$

(e) $4^2 \div 4^0$ (f) $4^5 \div 4^{-2}$

(g) $4^5 \div 5^4$ (h) $5^{2.5} \div 5^{0.5}$

(i) $\frac{5^7}{5^2}$ (j) $\frac{(-5)^7}{(-5)^2}$

Simplify:

(a) $(3^4)^5$ (b) $(3^5)^4$

(c) $(3^2)^5$ (d) $(3^{-2})^5$

(e) $(3^4)^1$ (f) $3^3 \times (3^4)^{0.5}$

Simplify:

(a) $\frac{2^3 \times 2^8}{2^5}$ (b) $\frac{2^{-3} \times 2^8}{2^1}$

Find x:

(a) $5^x \times 5^4 = 5^7$

(b) $\frac{3^x \times 3^{-2}}{3^4} = 3^{10}$

(c) $10^2 \times 10^x = 1000000$

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