



Simplify expressions using exponent laws

- 1** What picture shows the meaning of this exponent expression?

$$5^2$$

A 	B
C 	D

- 2** Find the answer when these terms are multiplied

$$5^2 \cdot 5^2$$

A 5^3	B 5^0
C 5^{400}	D 5^4

- 3** Find the answer when these terms are multiplied

$$d^2 \cdot d^2 \cdot d^2 \cdot d^2$$

A d^0	B d^9
C d^8	D d^7

- 4** Find the answer when these terms are multiplied

$$(y) \cdot \left(\frac{1}{y}\right)$$

A y^{-2}	B y^3	C y^8
D y^0	E y^{-1}	F y^9

- 5** Find the answer when these terms are multiplied

$$\left(\frac{1}{p \times p \times p}\right) \cdot \left(\frac{1}{p \times p}\right)$$

A p^6	B p^3	C p^{-2}
D p^{-5}	E p^{-9}	F p^5

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Find the answer when these terms are multiplied

$$(m^4) \cdot (m^4)$$

A m^8	B m^9	C m^2
D m^0	E m^3	F m^{16}

7

Find the answer when these terms are divided

$$\frac{m^3}{m^2}$$

A m^4	B 1	C m
D $\frac{1}{m^2}$	E $\frac{1}{m}$	F m^2

8

Find the answer when these terms are multiplied

$$(p^6) \cdot (p^{-5})$$

A p^{-10}	B p	C p^{-3}
D p^6	E p^{-5}	F p^{-6}

9

Find the answer when these terms are multiplied

$$(m^{-2}) \cdot (m^{-2})$$

A m^5	B m^6
C m^{-7}	D m^{-6}
E m^{-4}	F m

10

Find the answer when these terms are multiplied

$$(d^2) \cdot (d^{-4})$$

A d^{-9}	B d^{-1}	C d^3
D d^8	E d^5	F d^{-2}

11

Find the answer when these terms are divided

$$\frac{m^{-4}}{m^{-5}}$$

A $\frac{1}{m^2}$	B m	C m^2
D $\frac{1}{m}$	E 1	F m^4

12

Find the answer when these terms are divided

$$\frac{p^{-10}}{p^{-7}}$$

A p^{-5}	B p	C p^{-6}
D p^{-1}	E p^6	F p^{-3}

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Find the answer when these terms are divided

$$\frac{y^{-4}}{y^2}$$

A y^{-4}	B y^5	C y^{-10}
D y^{-6}	E y^3	F y^2

**Simplify expressions using exponent laws**

- 14** Find the answer when these terms are divided

$$\frac{d^{-4}}{d^{-2}}$$

A d	B d^0	C $\frac{1}{d^5}$
D $\frac{1}{d^4}$	E $\frac{1}{d^2}$	F $\frac{1}{d}$

- 15** Find the answer when these terms are multiplied

$$(m \times m) \cdot \left(\frac{1}{m \times m \times m \times m} \right)$$

A m	B m^{-2}
C m^{-7}	D m^3
E m^4	F m^{-8}

- 16** Find the answer when these terms are multiplied

$$\frac{1}{z^5} \cdot \frac{1}{z^5}$$

A z^{-11}	B z^{-10}
C z^{-1}	D z^{-9}

- 17** Find the answer when these terms are multiplied

$$\frac{1}{22^5} \cdot \frac{1}{22^5} \cdot \frac{1}{22^5} \cdot \frac{1}{22^5} \cdot \frac{1}{22^5}$$

A 22^0	B 22^{-25}
C 22^{-250}	D 22^{-20}

- 18** Find the answer when these terms are multiplied

$$\frac{1}{2^3} \cdot \frac{1}{2^3} \cdot \frac{1}{2^3} \cdot \frac{1}{2^3} \cdot \frac{1}{2^3}$$

A 2^{-15}	B 2^{-150}
C 2^{-12}	D 2^{-1}
E $2^{-1,500}$	

- 19** Use the power of a product rule to write this as a single power of a product.

$$4^2 \cdot 5^2$$

A $(4 \cdot 5)^3$	B $(4 \cdot 5)^2$
C $(4 \cdot 5)^4$	D $(9)^2$

- 20** Solve the equation by dividing powers of ten

$$\frac{10^{-10}}{10^{-6}}$$

A 10^{-2}	B 10^{-6}
C 10^{-3}	D 10^{-5}
E 10^{-4}	