

period

Multiplication properties of
Exponents.

1) $(z^5)^3$
 z^{15}

2) $(m^4)^{10}$
 m^{40}

3) $(v^7)^{\frac{1}{2}}$
 $v^{\frac{7}{2}}$

4) $(k^{\frac{4}{3}})^3$
 k^4

5) $(x^7)^{-2}$
 x^{-14}
 $\frac{1}{x^{14}}$

6) $(h^{\frac{1}{4}})^6$
 $h^{\frac{6}{4}}$
 $h^{\frac{3}{2}}$

7) $b(b^{-8})^{-3}$
 $b \cdot b^{24}$
 b^{25}

8) $h^2(h^7)^0$
 $h^2 \cdot h^0$
 $h^2 \cdot 1$
 h^2

9) $(m^2)^{\frac{3}{2}} h^{\frac{1}{7}}$
 $m^2 h^{\frac{1}{7}}$

10) $(x^6)^2 (y^3)^0$
 $x^{12} y^0$
 $x^{12} \cdot 1$
 x^{12}

11) $(g^5)^{-5} (g^6)^{-2}$
 $g^{-25} g^{-12}$
 g^{-37}
 $\frac{1}{g^{37}}$

12) $(v^2)^3 (w^4)^{\frac{1}{3}}$
 $v^6 \cdot w^{\frac{4}{3}}$

13) $(6a)^4$
 $6^4 a^4$
 $1296 a^4$

14) $(5f)^{-3}$
 $5^{-3} f^{-3}$
 $\frac{1}{5^3 f^3}$
 $\frac{1}{125 f^3}$

15) $(9z)^{\frac{1}{2}}$
 $9^{\frac{1}{2}} z^{\frac{1}{2}}$
 $3 z^{\frac{1}{2}}$

$$16) (16m^3)^{-2}$$

$$10^{-2} m^{-6}$$

$$\frac{1}{16^2 m^6}$$

$$\frac{1}{100 m^6}$$

$$17) (6j^{-2})^{-3}$$

$$6^{-3} j^6$$

$$\frac{j^6}{6^3}$$

$$\frac{j^6}{216}$$

$$18) (9d^{10})^{-2}$$

$$9^{-2} d^{-20}$$

$$\frac{1}{9^2 d^{20}}$$

$$\frac{1}{81 d^{20}}$$

$$19) (gh)^0$$

$$1$$

$$20) (9k^6)^{\frac{1}{2}}$$

$$9^{\frac{1}{2}} k^3$$

$$21) (m^{\frac{4}{7}})^7 (m^4)^3$$

$$m^4 m^{12}$$

$$m^{16}$$

$$22) (xy^2)(x^{-1}y^2)^{-1}$$

$$xy^2 x^{-1} y^{-2}$$

$$\frac{xy^2}{xy^2} = 1$$

$$23) (5 \times 10^7)^2$$

$$25 \times 10^{14+1}$$

$$2.5 \times 10^{15}$$

$$24) (2 \times 10^4)^6$$

$$2^6 \times 10^{24}$$

$$64 \times 10^{24+1}$$

$$6.5 \times 10^{25}$$

$$25) (9 \times 10^{-12})^2$$

$$9^2 \times 10^{-24}$$

$$81 \times 10^{-24+1}$$

$$8.1 \times 10^{-23}$$

$$26) (3 \times 10^{-8})^3$$

$$3^3 \times 10^{-24}$$

$$27 \times 10^{-24+1}$$

$$2.7 \times 10^{-23}$$

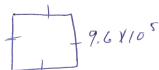
$$27) (3.6 \times 10^5)^2$$

$$3.6^2 \times 10^{10}$$

$$12.96 \times 10^{10+1}$$

$$1.296 \times 10^{11}$$

28) The side length of a square is 9.6×10^5 .
What is the area of the square?



$$A = bh \quad A = LW \quad A = \text{side}^2$$

$$A = \text{side}^2$$

$$A = (9.6 \times 10^5)^2$$

$$9.6^2 \times 10^{10}$$

$$92.16 \times 10^{10+1}$$

$$9.216 \times 10^{11}$$

$$29) (p^4)^{\boxed{2}} = p^{\boxed{8}}$$

$\swarrow \quad 8/4=2$

$$30) (z^{\boxed{4}})^6 = z^{-24}$$

$$31) (t^{12})^{\boxed{0}} = 1$$

$$32) (w^3)^{\boxed{4}} = w^{-12}$$

$$33) (n^{-8})^{\boxed{1.5}} = n^1$$

$$-\frac{12}{3} = \boxed{-4}$$

$$\left(\frac{1}{-8}\right)$$