

① $x^5 \cdot x^2$
 $x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$
 x^7

FORMULA
 $x^n \cdot x^m$
 $= x^{n+m}$

② $y^8 \cdot y$
 $y^8 \cdot y^1$
 y^{8+1}
 y^9

③ $(-x)^1 (-x)^3$
 $(-x)^{1+3}$
 $(-x)^4$
 x^4 VS $-x^4$

④ $(2^3)^2$
 $2^3 \cdot 2^3$
 $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$
 2^6
 64

FORMULA
 $(x^m)^n$
 $= x^{m \cdot n}$

⑤ $[(-x)^3]^5$
 $(-x)^{3 \cdot 5}$
 $(-x)^{15}$
 $-x^{15}$

⑥ $(k^4)^5$
 $k^{4 \cdot 5}$
 k^{20}

⑦ $(3y^5)^2$
 $(3)^2 (y^5)^2$
 $9y^{10}$

NOTE: IF EVERYTHING IS EITHER MULTIPLICATION OR DIVISION INSIDE THE PARENTHESES RAISE EVERYTHING TO THAT POWER

⑧ $(\frac{3}{5}x^3)^2$ ex: $(x+3y)^2$
 $\frac{3^2}{5^2} (x^3)^2$
 $\frac{9}{25} x^6$

⑨ $(-3m^4n^5)^4$
 $(-3)^4 (m^4)^4 (n^5)^4$
 $81m^{16}n^{20}$

⑩ $(-2xy^4)^3$
 $(-2)^3 (x)^3 (y^4)^3$
 $-8x^3y^{12}$

⑪ $(3y^4)(5y^{10})$
 $3 \cdot 5 \cdot y^4 \cdot y^{10}$
 $15y^{14}$

⑫ $(2a^3b^{10})(3a^4b^7)$
 $6a^4b^{17}$

⑬ $(\frac{3}{4}x)(-12x^3y)(-\frac{2}{9}x)$

$(\frac{3}{4})(-12)(-\frac{2}{9})x^1 \cdot x^3 \cdot x^1 \cdot y$

$(\frac{3}{4})(-12)(-\frac{2}{9})x^5y$

$(\frac{1}{4})(-12)(-\frac{2}{9})x^5y$

$(\frac{1}{4})(-12)(-\frac{2}{9})x^5y$

$(\frac{1}{4})(\frac{-6}{1})(\frac{-1}{3})x^5y$

$(\frac{1}{4})(\frac{-6}{1})(\frac{-1}{3})x^5y$

$\frac{2}{3}x^5y$