

Exponent Rules/Properties

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

$$\frac{x^m}{x^n} = x^{m-n}$$

$$(x^m)^n = x^{mn}$$

$$x^0 = 1$$

$$x^1 = x$$

$$\text{If } x^m = x^n, \text{ then } m=n$$

$$x^r = x^r$$

$$(xy)^m = x^m y^m$$

$$\left(\frac{x}{y}\right)^m = \frac{x^m}{y^m}$$

$$x^{-1} = \frac{1}{x}, \text{ -1 can be any negative number}$$

$$x^{-20} = \frac{1}{x^{20}}$$

$$\frac{1}{x^{-1}} = x, \text{ -1 can be any negative number}$$

$$(\sqrt[n]{x})^m = x^{\frac{m}{n}}$$

$e = 2.72$ e is like π , it is a decimal that goes on forever, it is irrational

Scientific notation: # < 10 times 10^x ex. 3.2×10^5 $3.2 E 5$

If base is 10, then positive exponent moves decimal to the right.

If base is 10, then negative exponent moves decimal to the left.

$a^{\log_a m} = m$ since they are inverses of each other.

Exponent Rules/Properties

$$x^m \cdot x^n = \underline{\hspace{2cm}}$$

$$\frac{x^m}{x^n} = \underline{\hspace{2cm}}$$

$$(x^m)^n = \underline{\hspace{2cm}}$$

$$x^0 = \underline{\hspace{2cm}}$$

$$x^1 = \underline{\hspace{2cm}}$$

$$\text{If } x^m = x^n, \text{ then } \underline{\hspace{2cm}}$$

$$x^r = \underline{\hspace{2cm}}$$

$$(xy)^m = \underline{\hspace{2cm}}$$

$$\left(\frac{x}{y}\right)^m = \underline{\hspace{2cm}}$$

$$x^{-1} = \underline{\hspace{2cm}}, \text{ -1 can be any negative number}$$

$$\frac{1}{x^{-1}} = \underline{\hspace{2cm}}, \text{ -1 can be any negative number}$$

$$(\sqrt[n]{x})^m = \underline{\hspace{2cm}}$$

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Scientific notation: _____

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