

Review

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① $(-2)^5$

Base = -2

Exponent = 5

(N.C.)

Expanded form: $(-2) \times (-2) \times (-2) \times (-2) \times (-2)$

Standard form: -32

② Evaluate! $-(2)^3$

(N.C.)

③ Write as a power of 10: a) $1000 = 10^3$ b) $10000000 = 10^7$

c) $1 = 10^0$

(N.C.)

(Anything)⁰ = 1 except $(0)^0$ is undefined.

d) $\overset{5}{7} \overset{4}{3} \overset{3}{0} \overset{2}{8} \overset{1}{4} \overset{0}{2} =$

$7 \times 10^5 + 3 \times 10^4 + 8 \times 10^2 + 4 \times 10^1 + \underline{\underline{2 \times 10^0}}$

④ Which is greater? 3^4 or 4^3 ?

(N.C.)

\downarrow
 $3 \times 3 \times 3 \times 3$
 $= 81$

\downarrow
 $4 \times 4 \times 4$
 $= 64$

$\overset{4}{3} > \overset{3}{4}$

⑤ Write -1 as a power of non-1's.

$-3^0 = -1 \times 3^0$, $-(-32)^0$, -1^2 , $-(3)^0$
 $-(2^4)^0$, $(-2^0)^{\text{odd \#}} = -1$

$(-2^0)^2 = (-1)^2 = +1$

⑥ Write each expression as a single value power!

6) Write each expression as a single value power!

a) $5^3 \times 5^6 = 5^9$

b) $(-2)^6 \div (-2)^1 = (-2)^5$

c) $[(-3)^2]^5 = (-3)^{10}$

d) $(5 \times 7)^2 = 5^2 \times 7^2$

WARNING: $(5+7)^2 \neq 5^2 + 7^2$
 $(5+7)^2 = 12^2$

e) $\left(\frac{7}{5}\right)^2 = \frac{7^2}{5^2}$

$\left(\frac{4}{2}\right)^2 = \frac{4^2}{2} ? \times$

or $\left(\frac{4}{2}\right)^2 = \frac{4^2}{2^2} ? \checkmark$

Evaluate

7) $-(2^2)^3 = -(4)^3 = (-1) \times 64 = -64$

8) $\frac{2^5 \times 2^3 \div 2^2}{2 \times 2^4} = \frac{2^8 \div 2^2}{2^5} = \frac{2^6}{2^5} = 2^1 = 2$

Evaluate

9) Evaluate!

a) $11 - (-2 - 5)^2 \times (2^3)^0 + 2$

BEDMAS

$11 - (-7)^2 \times 1 + 2$

(NC)

$11 - 49 \times 1 + 2$

$11 - 49 + 2$

$-38 + 2$

$$= -36 //$$

$$b) \quad \underbrace{5^2 \times 5^3}_{5^5} + \underbrace{5^3 \times 5^1}_{5^4}$$

(NC)

$$5^5 + 5^4 \neq 5^9 !!!$$

$$3125 + 625$$

$$3750 //$$

(10)

$$\frac{3^4}{3^2 + (-3)^2}$$

Using calc. I got 18. Am I correct?

No!

Why?

$$\Rightarrow 3^4 \div [3^2 + (-3)^2] = 4.5$$

wrong way: $3^4 \div 3^2 + (-3)^2$

$$3^2 + (-3)^2 = 9 + 9 = 18 \quad \times$$