

- ① Base
- ② Exponent
- ③ Power
- ~~④ Parantheses, brackets~~
- ⑤ B ⑥ C ⑦ A ⑧ D
- ⑨ 9 ⑩ 36 ⑪ 2^3 ⑫ 9^5
- ⑬ 3^4 ⑭ 5^2 ; 25 ⑮ 16
- ⑯ 64 ⑰ 1 ⑱ 0 ⑲ 729
- ⑳ 32 ㉑ 125

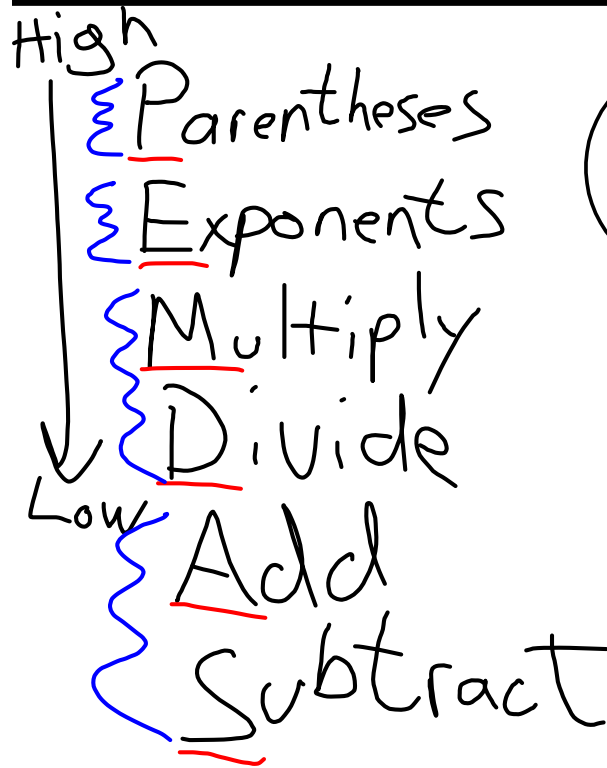
- ④① 2^9 ④③ 9 ④④ 1
- ④⑦ 6 ④⑨ 15,625
- ⑤① 100,000 ④⑤ 20
- ⑤⑤ 2^3 , 8 cubic units
- ⑤⑥ 3^3 , 27 cubic units
- ⑤⑦ 4^3 , 64 cubic units

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$$\begin{aligned} & \underline{(5-4)}^7 \\ & \quad | \\ & \underline{(1)}^7 \\ & \quad \underbrace{\hspace{1.5cm}} \\ & \quad \underline{\underline{1}} \end{aligned}$$

Ch. 1.3
Order of Operations

Sept. 5, 2006



ex1 $x = 4$; $3x^2 + 1$

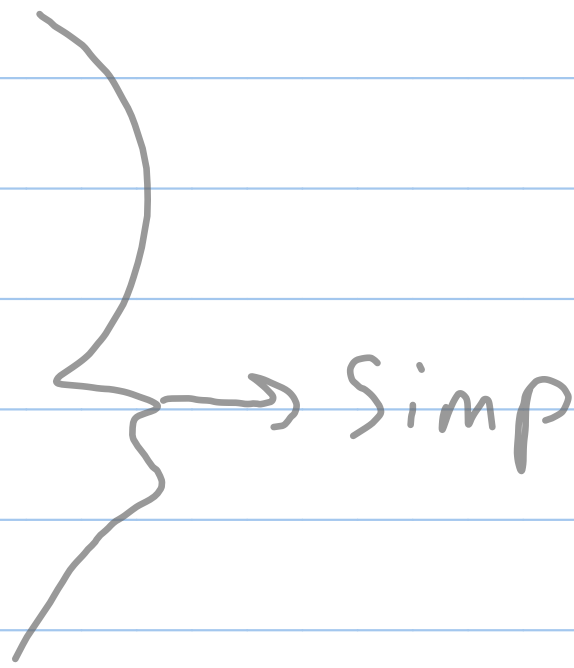
$3x^2 + 1 \rightarrow \text{exp.}$
 $3(4)^2 + 1 \rightarrow \text{sub.}$

$3 \cdot 16 + 1$

$48 + 1$

49

we will
do tree
math



Simp

ex2) Let $x=2$; $2x^2+5$

$$2x^2+5$$

→ exp.

$$2(\underline{2})^2+5$$

→ sub.

$$\underline{2 \cdot 4} + 5$$

$$\underline{8 + 5}$$

$$\underline{\underline{13}}$$

→ simp.

Left-to-Right Rule: when operations have the same priority, you perform them in order from Left-to-Right

ex3) $24 - 8 - 6$

$$\begin{array}{r} 24 - 8 - 6 \\ \hline 16 - 6 \\ \hline \underline{10} \end{array}$$

ex4) $15 \cdot 2 \div 6$

$$\begin{array}{r} 15 \cdot 2 \div 6 \\ \hline 30 \div 6 \\ \hline \underline{5} \end{array}$$

ex 5) $5 + 30 \cdot 4 \div 2^3 - 3$

$5 + 30 \cdot 4 \div 8 - 3$

$5 + 120 \div 8 - 3$

$5 + 15 - 3$

$20 - 3$

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Fraction Bar : Do All the

stuff on Top...

Do All the stuff on Bottom
Then Simplify.

Every "Branch"
is another
equal sign

exb)

only do 1 step, Per top or
Btm

$$\frac{7.4}{8+2^2-1} = \frac{28}{8+49-1} = \frac{28}{57-1} = \frac{28}{56} = \frac{4}{8} = \frac{1}{2}$$

O.T.L.

① pg 18-19 : 1-46 (even),

② Quiz Thursday