

modulus = | |

mod of $x = \text{mod}(x)$

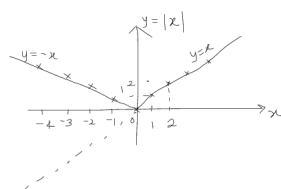
* $\text{mod}(-5) = +5 \Rightarrow |-5| = 5$

* $|-15| = +15$

* $|-123| = +123$

* $|123| = +123$

$$|x| = \begin{cases} x & ; x \geq 0 \\ -x & ; x < 0 \end{cases} \Rightarrow |x| \geq 0$$



Note :- $\frac{a}{b} = \frac{c}{d}$

$$\frac{3}{5} = \frac{9}{15} \quad \begin{matrix} a=3 \\ b=5 \\ c=9 \\ d=15 \end{matrix}$$

1) $\frac{a+b}{b} = \frac{c+d}{d} \Rightarrow \frac{8}{5} = \frac{24}{15}$

2) $\frac{a-b}{b} = \frac{c-d}{d} \Rightarrow \frac{-2}{5} = \frac{-6}{15}$

3) $\frac{a+b}{a-b} = \frac{c+d}{c-d} \Rightarrow \frac{8}{-2} = \frac{24}{-6}$

①/② $\Rightarrow \frac{(a+b)/b}{(a-b)/b} = \frac{(c+d)/d}{(c-d)/d}$

$$\begin{aligned} \frac{a}{b} &= \frac{c}{d} \\ \frac{a}{b} + 1 &= \frac{c}{d} + 1 \\ \frac{a+b}{b} &= \frac{c+d}{d} \\ \frac{a-b}{b} &= \frac{c-d}{d} \end{aligned}$$