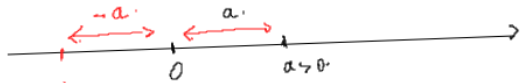


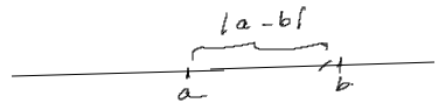
Valeur absolue

$$|a| = \begin{cases} a & \text{si } a \geq 0 \\ -a & \text{si } a < 0 \end{cases}$$



$|a|$ = distance de a à 0.

$|a - b|$ = distance entre a et b .



$$|-a| = |a|, \quad |a \cdot b| = |a| \cdot |b|, \quad \sqrt{a^2} = |a|.$$

$$|a + b| \leq |a| + |b|.$$

$$\left| \frac{a}{b} \right| = \frac{|a|}{|b|}, \quad b \neq 0$$

Ex:

$$A = |(-8) - 5| - 2|-3| + |3(-4)| - \left| \frac{10}{-2} \right| - \frac{|-15|}{-3} + 0.5 + \frac{1}{4} |-2|.$$

$$\bullet \quad |(-8) - 5| = |-13| = |13| = 13.$$

$$\bullet \quad 2|-3| = 2 \cdot (3) = 6.$$

$$\bullet \quad |3(-4)| = |3||-4| = 3 \cdot (4) = 12.$$

$$\bullet \quad \left| \frac{10}{-2} \right| = \frac{|10|}{|-2|} = \frac{10}{2} = 5.$$

$$\bullet \quad \frac{|-15|}{-3} = \frac{-(-15)}{-3} = \frac{15}{-3} = \frac{5 \times 3}{-3} = -5$$

$$\bullet \quad \frac{1}{4} |-2| = \frac{1}{4} (2) = \frac{1}{2 \times 2} \times 2 = \frac{1}{2}$$

$$\begin{aligned} A &= \underbrace{13}_{7} - \underbrace{6}_{7} + \underbrace{12}_{5} - \underbrace{5}_{1} - (-5) + 0.5 + 0.5 \\ &= \underbrace{7}_{14} + \underbrace{7}_{6} + 5 + 1 \\ &= 14 + 6 + 5 + 1 \end{aligned}$$

$$\underline{A = 20.}$$