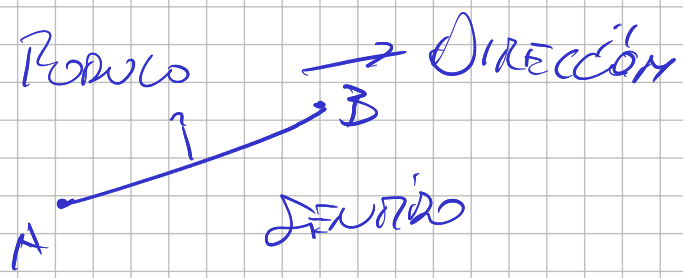
VECTOR



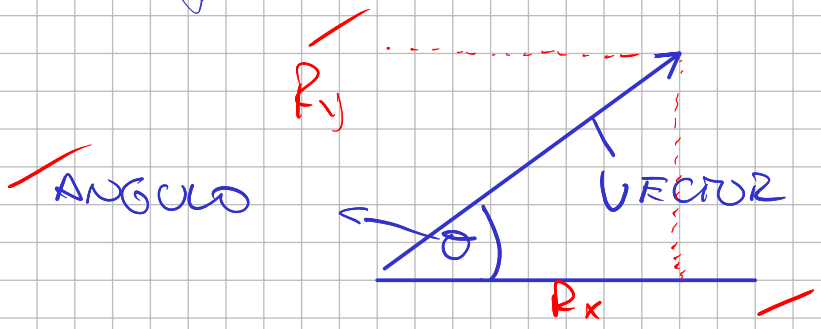

MAGNITUD → PROPIEDADES QUE SE PUEDE MEDIR

ESCALARES

30 C°
30 m°
12 KG

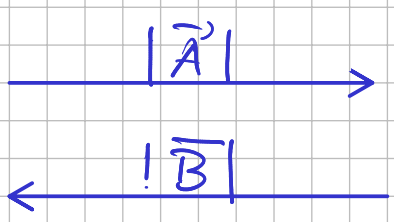
VECTORIALES

15 Km/h →
← 16 N




MAGNITUD = MEDIDA

MAGNITUD y MODULO



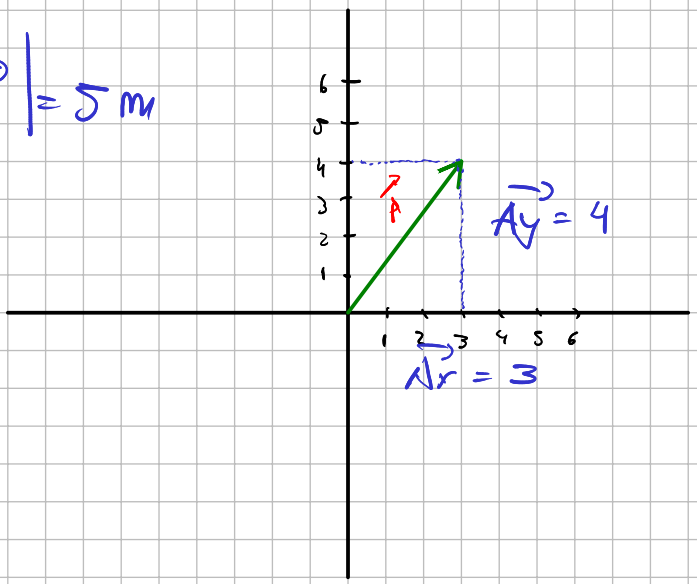

$|\vec{A}| = 7m$


$|\vec{C}| = 3m$

$\vec{A} =$
$\vec{B} =$
$\vec{C} =$

$\vec{A} = (3, 4) \rightarrow |\vec{A}| = 5\,m$

$\vec{B} = (-3, 2$




$|\vec{A}|^2 = x^2 + y^2$

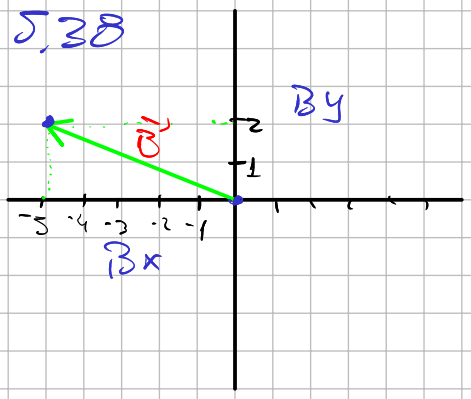
$|\vec{A}| = \sqrt{x^2 + y^2}$

$|\vec{A}| = \sqrt{(3)^2 + (4)^2}$

$|\vec{A}| = \sqrt{25}$

$|\vec{A}| = 5$

$\vec{B} = \begin{pmatrix} Bx & By \\ -5 & 2 \end{pmatrix}$ $|\vec{B}| = 5.38$




$|\vec{B}|^2 = Bx^2 + By^2$

$|\vec{B}| = \sqrt{Bx^2 + By^2}$

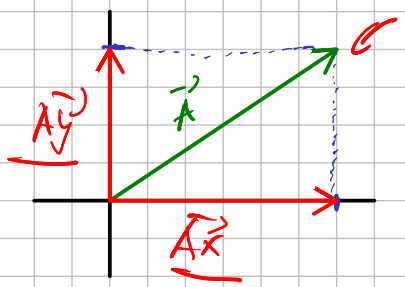
$|\vec{B}| = \sqrt{(-5)^2 + (2)^2}$

$|\vec{B}| = \sqrt{25 + 4}$

$|\vec{B}| = \sqrt{29}$

$|\vec{B}| = 5.38$

## COMPOSANTES RECTANGULAIRES



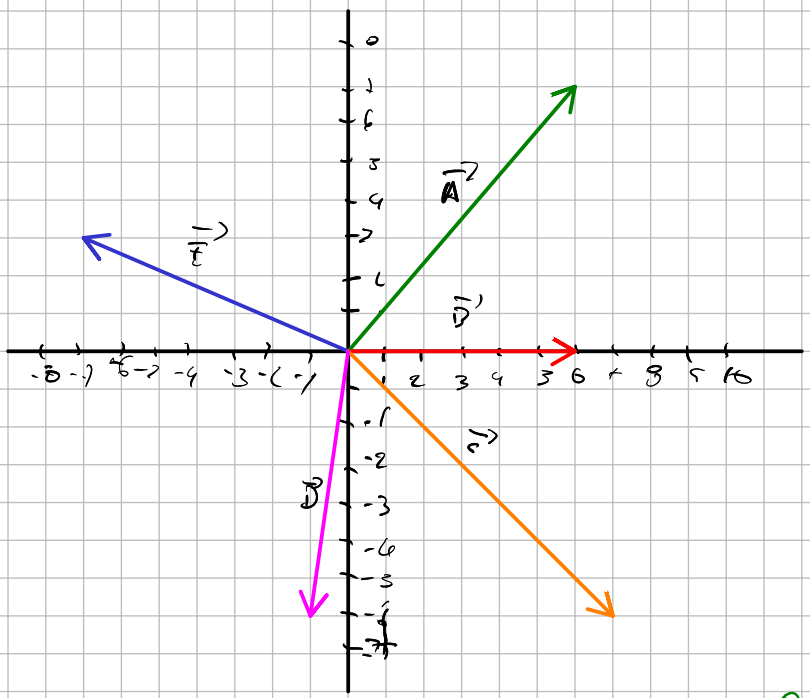

$\vec{A} = (6, 7)$

$\vec{B} = (6, 0)$

$\vec{C} = (7, -6)$

$\vec{D} = (-1, -6)$

$\vec{E} = (-7, 3)$

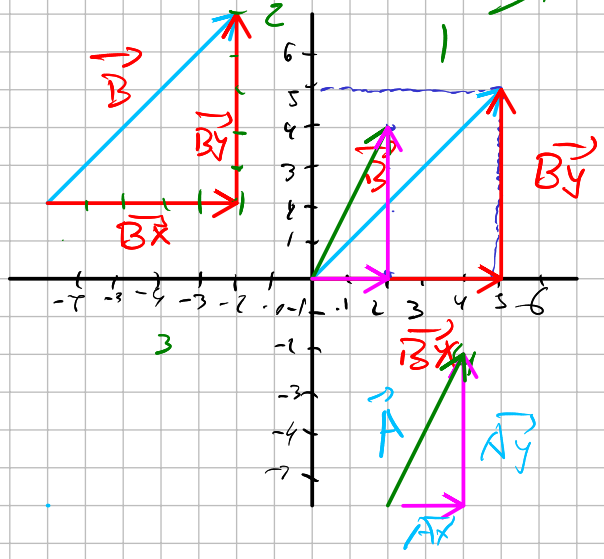



## EXEMPLE

$\vec{B} = (5, 5)$

$\vec{A} = (2, 4)$

$\vec{A_x}$ $\vec{A_y}$



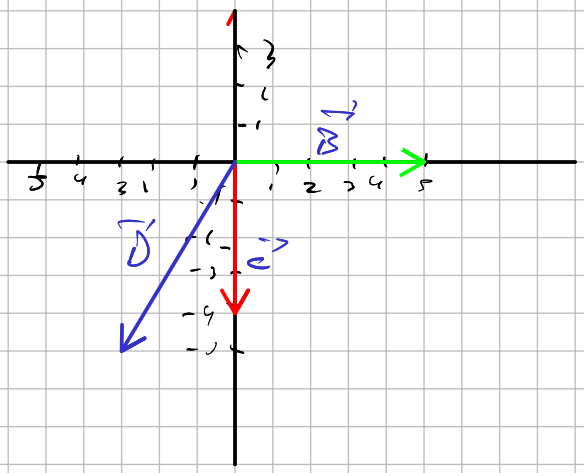

$\vec{B} = \begin{pmatrix} 5 & 5 \\ Bx & By \end{pmatrix}$

$\vec{A} = \begin{pmatrix} 2 & 4 \\ Ax & Ay \end{pmatrix}$

$\vec{B} = (5, 0)$

$\vec{C} = (0, -4)$

$\vec{D} = (-3, -5)$




$A = (3, 5)$

$B = (-1, 2)$

$\vec{AB} = (-4, -3)$

$C = (3, -3)$

$D = (-4, -2)$

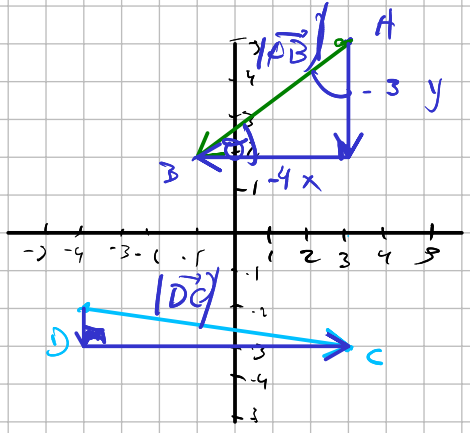
$\vec{DC} = (-1, 7)$

$|\vec{AB}| = 5$

$\theta = 53.13°$

$ABx = -4$

$ABy = -3$ //




$|\vec{AB}| = \sqrt{(-4)^2 + (-3)^2}$

$|\vec{AB}| = \sqrt{16 + 9}$

$|\vec{AB}| = \sqrt{15}$

$|\vec{AB}| = 5$

$\tan\theta = \frac{CO}{|\vec{AB}|}$

$\tan\theta = \frac{-4}{5}$

$\tan^{-1}\theta = \tan^{-1}\frac{-4}{5}$

$\theta = 53.13°$

$A = (2, 4)$

$B = (3, 1)$

$\vec{BA} = (-1, 3)$

$|\vec{BA}| = 3.16$

$\theta = 72,42° \rightarrow 71,68°$

$BAx = -1$

$BAy = 3$

$\vec{BA} = (-1, 3)$

$|\vec{BA}| = \sqrt{(-1)^2 + (3)^2}$

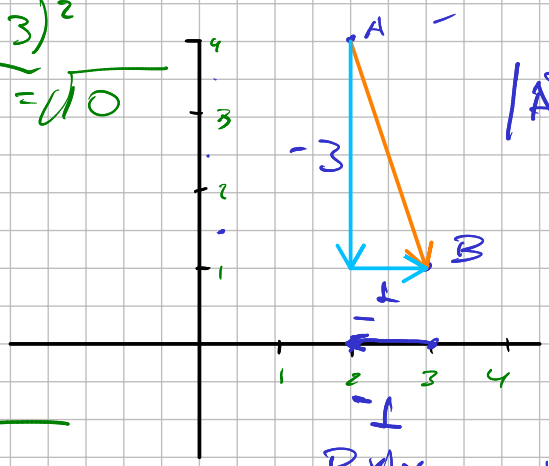
$|\vec{BA}| = \sqrt{1 + 9} = \sqrt{10}$

$|\vec{BA}| = 3.16$

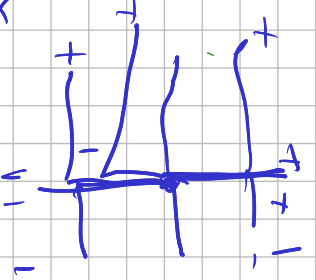
$\tan\theta = \frac{BAy}{|\vec{BA}|}$

$\theta = \tan^{-1}\frac{3}{3.16}$

$\theta = 71,68°$




$|\vec{AB}| (-3, 1)$



TAREA

VIERNES 15/12/23
23:59 PM

$\vec{A} = (-4, 4)$

$\vec{B} = (5, -3)$

$M = (2, 4)$

$N = (-3, 3)$

$P = (1, -4)$

$\vec{MN} = ?$ $|\vec{MN}|$ @ $\vec{MN} \times \vec{MN}$

$\vec{PN} = ?$

$\vec{MA} = ?$

$\vec{NB} = ?$