2020) $\vec{u} = (3, -4)$

$$|\vec{u}| = \sqrt{3^2 + (-4)^2} = \sqrt{9+16} = \sqrt{25} = 5$$

2022) d) $\vec{u} = (2, 3)$ $\vec{v} = (-2, 4)$

$$\vec{u} \cdot \vec{v} = 2 \cdot (-2) + 3 \cdot 4 = -4 + 12 = 8$$

$(2,3)$ i $(4,6)$

$y = ax + b$

$\begin{cases} 3 = a \cdot 2 + b \\ 6 = a \cdot 4 + b \end{cases}$

$3 = 2a$

$\frac{3}{2} = a \Rightarrow a = 1.5$

$3 = 1.5 \cdot 2 + b$

$3 = 3 + b$

$3 - 3 = b \Rightarrow b = 0$

$y = 1.5x$

$\begin{cases} 3 - 2a = b \\ 6 = a \cdot 4 + 3 - 2a \end{cases}$

$6 - 3 = 4a - 2a$

$3 = 2a \Rightarrow a = \frac{3}{2} = 1.5$

$b = 3 - 2a = 3 - 2 \cdot 1.5 = 0$

$y = 1.5x$

2016) A(2,3) B(-1,5)

PENDIENTE ↓ ORDENADA EN EL ORIGEN

$y = ax + b$

a) $y = ax + b$

$3 = 2a + b$

$5 = -a + b$ → $a = b - 5$

$3 = 2(b-5) + b$

$3 = 2b - 10 + b$

$3 + 10 = 3b$

$13 = 3b \Rightarrow b = \frac{13}{3}$

$a = \frac{13}{3} - 5 = \frac{13-15}{3} = \frac{-2}{3}$

$y = -\frac{2}{3}x + \frac{13}{3}$

PENDIENTE $= -\frac{2}{3}$

b) $\alpha = \arctg\left(-\frac{2}{3}\right) = -33.69^\circ$