Dê o coeficiente angular de uma reta:

↳ m

1. Paralela ao eixo x.

$m = tg\alpha \Rightarrow \alpha = 0°$

$m = tg\ 0°$

$m = 0$

$m = 0$

2. De inclinação $\alpha = 60°$.

$m = tg\alpha$

$m = tg\ 60°$

$m = \sqrt{3}$

$m = \sqrt{3}$

3. De inclinação $\alpha = 120°$.

$m = tg\alpha$

$m = tg\ 120° = -tg60°$

$m = -\sqrt{3}$

$m = -\sqrt{3}$

4. Paralela ao eixo y.

$m = tg\alpha \Rightarrow \alpha = 90°$

$m = tg\ 90°$

$m = \nexists$

$\nexists\ m$

---

Calcule o coeficiente angular da reta que passa pelos pontos:

↳ $m = tg\alpha = \frac{y_B - y_A}{x_B - x_A}$

5. (1, 2) e (3, 10).

$(x_A, y_A)$ ↳ $(x_B, y_B)$

$m = \frac{10-2}{3-1} = \frac{8}{2} = 4$

$m = 4$

6. (-1, 3) e (4, -2).

$(x_A, y_A)$ ↳ $(x_B, y_B)$

$m = \frac{-2-3}{4-(-1)} = \frac{-5}{5} = -1$

$m = -1$

---

Calcule o coeficiente angular de cada reta:

$y = mx + n$

Vamos isolar o y → equação reduzida da reta

7. $2x + 4y + 7 = 0$

$4y = -2x - 7$

$y = \frac{-2x - 7}{4}$

$y = \frac{-2}{4}x - \frac{7}{4}$

$m$

$m = \frac{-2}{4} = \frac{-1}{2}$

$m = -1/2$

8. $3x - 9y - 1 = 0$

$9y = 3x - 1$

$y = \frac{3x - 1}{9}$

$y = \frac{3}{9}x - \frac{1}{9}$

$m$

$m = \frac{3}{9} = \frac{1}{3}$

$m = 1/3$

9. $x - y + 2 = 0$

$y = x + 2$

$m$

$m = 1$

$m = 1$

10. $\frac{x}{2} + \frac{y}{3} = 1$

$\frac{3x + 2y}{6} = 1$

$3x + 2y = 6$

$2y = -3x + 6$

$y = \frac{-3x + 6}{2}$

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

$m$

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

$m = -3/2$

---

Calcule o coeficiente angular e dê a medida do ângulo de inclinação da reta:

↳ m

$m = \frac{y_B - y_A}{x_B - x_A} \Rightarrow tg\alpha \Rightarrow \alpha = tg^{-1}(m)$

11. $r$, da equação $3x - \sqrt{3}y + \sqrt{3} = 0$.

Isolando y:

$\sqrt{3}y = 3x + \sqrt{3}$

$y = \frac{3x + \sqrt{3}}{\sqrt{3}}$

$y = \frac{3}{\sqrt{3}}x + 1$

$m$

$m = \frac{3}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{3\sqrt{3}}{3} = \sqrt{3}$

$\alpha = tg^{-1}(\sqrt{3}) = 60°$

$m = \sqrt{3}, \alpha = 60°$

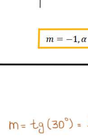
12. $s$, que passa por $(5, -3)$ e $(-1, 3)$.

$(x_A, y_A)$ ↳ $(x_B, y_B)$

$m = \frac{3 - (-3)}{-1 - 5} = \frac{6}{-6} = -1$

$\alpha = tg^{-1}(-1) = -45°$

* Lembre que $\alpha$ é dado no sentido anti-horário em relação ao eixo x:




$180° - 45° = \alpha$

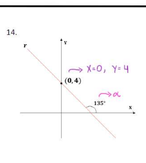
$\alpha = 135°$

$m = -1, \alpha = 135°$

---

Escreva a equação reduzida da reta $r$ em cada caso:

13.




$x = 0, y = 6$

$m = tg(30°) = \frac{\sqrt{3}}{3}$

$y = \frac{\sqrt{3}}{3}x + n$

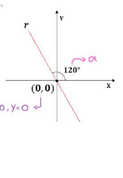
$6 = \frac{\sqrt{3}}{3} \cdot 0 + n$

$n = 6$

$y = \frac{\sqrt{3}}{3}x + 6$

$y = \frac{\sqrt{3}}{3}x + 6$

14.




$x = 0, y = 4$

$m = tg(135°)$

$m = -tg(45°) = -1$

$y = -x + n$

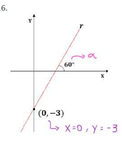
$4 = -0 + n$

$n = 4$

$y = -x + 4$

$y = -x + 4$

15.




$x = 0, y = 0$

$m = tg(120°)$

$m = -tg(60°) = -\sqrt{3}$

$y = -\sqrt{3}x + n$

$0 = -\sqrt{3} \cdot 0 + n$

$n = 0$

$y = -\sqrt{3} \cdot x$

$y = -\sqrt{3}x$

16.




$x = 0, y = -3$

$m = tg(60°) = \sqrt{3}$

$y = \sqrt{3}x + n$

$-3 = \sqrt{3} \cdot 0 + n$

$n = -3$

$y = \sqrt{3}x - 3$

$y = \sqrt{3}x - 3$