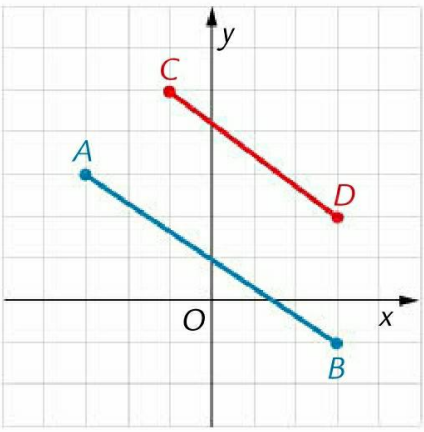
25/2/2021

354 Stabilisci se i due segmenti AB e CD disegnati nella figura sono paralleli.



$C(-1,5)$ $D(3,2)$

$A(-3,3)$ $B(3,-1)$

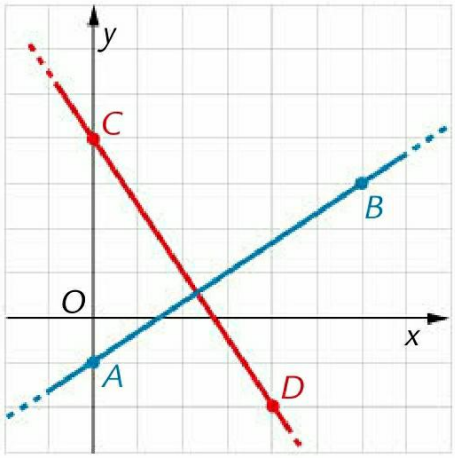
$$m_{AB} = \frac{y_B - y_A}{x_B - x_A} = \frac{-1-3}{3-(-3)} = \frac{-4}{6} = -\frac{2}{3}$$

$$m_{CD} = \frac{y_D - y_C}{x_D - x_C} = \frac{2-5}{3-(-1)} = \frac{-3}{4} = -\frac{3}{4}$$

$\neq$

Siccome i coeff. angolari sono diversi, i segmenti non sono paralleli

355 Stabilisci se le rette r ed s disegnate nella figura sono perpendicolari.



$C(0,4)$ $D(4,-2)$

$A(0,-1)$ $B(6,3)$

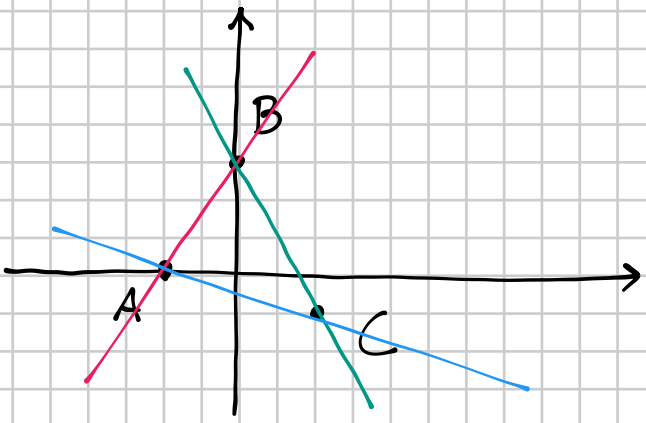
$$m_{CD} = \frac{-2-4}{4-0} = -\frac{6}{4} = -\frac{3}{2}$$

$$m_{AB} = \frac{3-(-1)}{6-0} = \frac{4}{6} = \frac{2}{3}$$

Siccome $m_{AB} = -\frac{1}{m_{CD}}$ le rette sono perpendicolari

378 Scrivi le equazioni delle rette cui appartengono i lati del triangolo ABC, essendo $A(-2, 0)$, $B(0, 3)$, $C(2, -1)$.

$[3x - 2y + 6 = 0; 2x + y - 3 = 0; x + 4y + 2 = 0]$



$$\frac{y - y_1}{y_2 - y_1} = \frac{x - x_1}{x_2 - x_1}$$

Retta AB $A(-2,0)$ $B(0,3)$

$$\frac{y-0}{3-0} = \frac{x+2}{0+2} \qquad \frac{y}{3} = \frac{x+2}{2}$$

$$\Downarrow$$

$$2y = 3(x+2)$$

$$\boxed{3x - 2y + 6 = 0}$$

Retta AC $A(-2,0)$ $C(2,-1)$

$$\frac{y-0}{-1-0} = \frac{x+2}{2+2} \qquad \frac{y}{-1} = \frac{x+2}{4}$$

$$4y = -(x+2)$$

$$\boxed{x + 4y + 2 = 0}$$

Retta BC $B(0,3)$ $C(2,-1)$

$$\frac{y-3}{-1-3} = \frac{x-0}{2-0} \qquad \frac{y-3}{-4_2} = \frac{x}{2_1} \qquad y - 3 = -2x$$

$$\boxed{2x + y - 3 = 0}$$