b) (d_2) is decreasing and forming an angle $60°$ with $x'ox$

then, $a_{(d_2)} = -\tan 60$.

$= -\sqrt{3}$.

but, (d_2) passes through A

then, $(d_2): \frac{y-y_A}{x-x_A} = -\sqrt{3}$

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

Thus, $(d_2): y = -\sqrt{3}x + 2\sqrt{3}$.

5) a) $\vec{CA} + \vec{CB} = ?$

I is midpt of [AB]. (given)

then,

$\vec{CA} + \vec{CB} = 2\vec{CI}$ (median & vectors
sum of vectors having same origin)

b) I is midpt of [AB]

then $x_I = \frac{x_A + x_B}{2}$ | $y_I = \frac{y_A + y_B}{2}$.

$x_I = \frac{2+0}{2} = 1$ | $y_I = \frac{0-4}{2} = -2$

$I(1, -2)$.

To prove that C, G & I are collinear,

$a_{(CG)} = \frac{y_G - y_C}{x_G - x_C} = \frac{-\frac{2}{3} - 2}{\frac{2}{3} - 0} = \frac{-8}{2} = -4$

$a_{(CI)} = \frac{y_I - y_C}{x_I - x_C} = \frac{-2-2}{1-0} = -4$

}.