



Test in/ Examen de :

Name/Le nom :

Class/ La Classe:

Time / La durée :

Date / La date:

Exercice 2.

1)

In the triangle ABC we have: D belongs to [AB]
E belongs to [AC]

$(DE) \parallel (BC)$ (given)

so by Thales' theorem

$$\frac{AD}{AB} = \frac{AE}{AC} = \frac{DE}{BC}$$

where $AE = 3 \text{ cm}$ (given)

$AC = AE + EC$ (collinear points)

$$= 3 + 6 = 9 \text{ cm}$$

$\frac{1}{4}$

so $\frac{3}{9} = \frac{x+2y-2}{2x+3y-6}$

and $DE = x+2y-2$
 $BC = 2x+3y-6$ } (given)

$$3(2x+3y-6) = 9(x+2y-2)$$

$$6x+9y-18 = 9x+18y-18$$

$$6x-9x+9y-18y = -18+18$$

$$-3x-9y = 0$$

$$9y = -3x$$

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

$\frac{1}{2}$

2) a) $g(x) = -\frac{1}{3}x$

g is a linear function since it is in the form $g(x) = ax$
where $a = -\frac{1}{3}$.

b) since $a = -\frac{1}{3} < 0$ then $g(x)$ is a decreasing function.

$\frac{1}{3}$

$\frac{1}{4}$