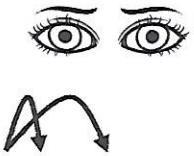
NOM, Prénom :

Test niveau fin de 3ème sans parole

Calculatrice autorisée

1

a)



$B = 2(x+3) = 2x+6$

$F = (2x-1)(3x+5) + (2x+3)^2$

F = $6x^2 + 10x - 3x - 5 + 4x^2 + 12x + 9$

$= 10x^2 + 19x + 4$

?

2

b)

$C = 8x + 4 = 4(2x+1)$

$G = 14x^2 - 21x$

G = $7x(2x-3)$

?

1,5

x ?

c) $8x + 11 = 2x - 7$

$8x - 2x = -7 - 11$

$6x = -18$

$x = -\frac{18}{6}$ $\quad x = -3$

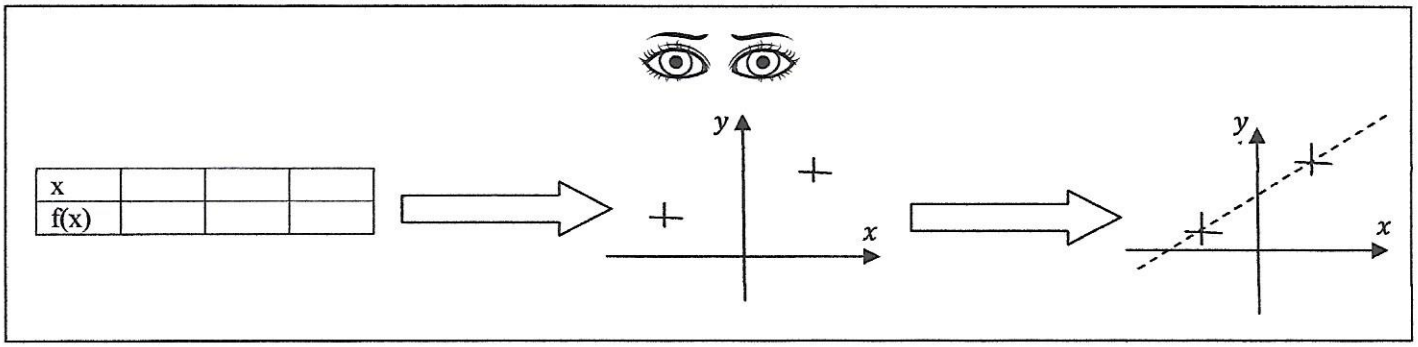
1,5

d) $x^2 - 16 = 0$

$(x+4)(x-4)$ $\quad x = -4$ et $x = 4$

1,5

2



2

1) $f(x) = 4x - 3$

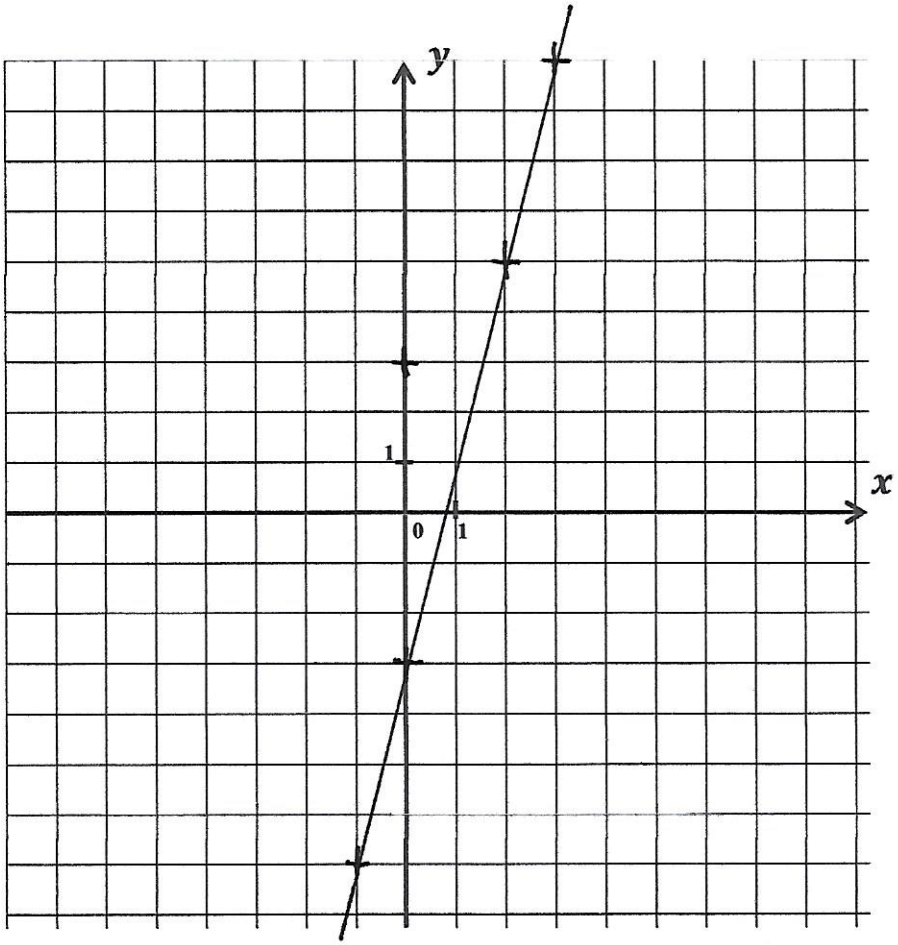
0,5 0,5 1

x	-1	0	? 2	3
f(x)	? -7	? -3	5	9

$4 \times (-1) - 3 = -7$ $5 = 4x - 3$

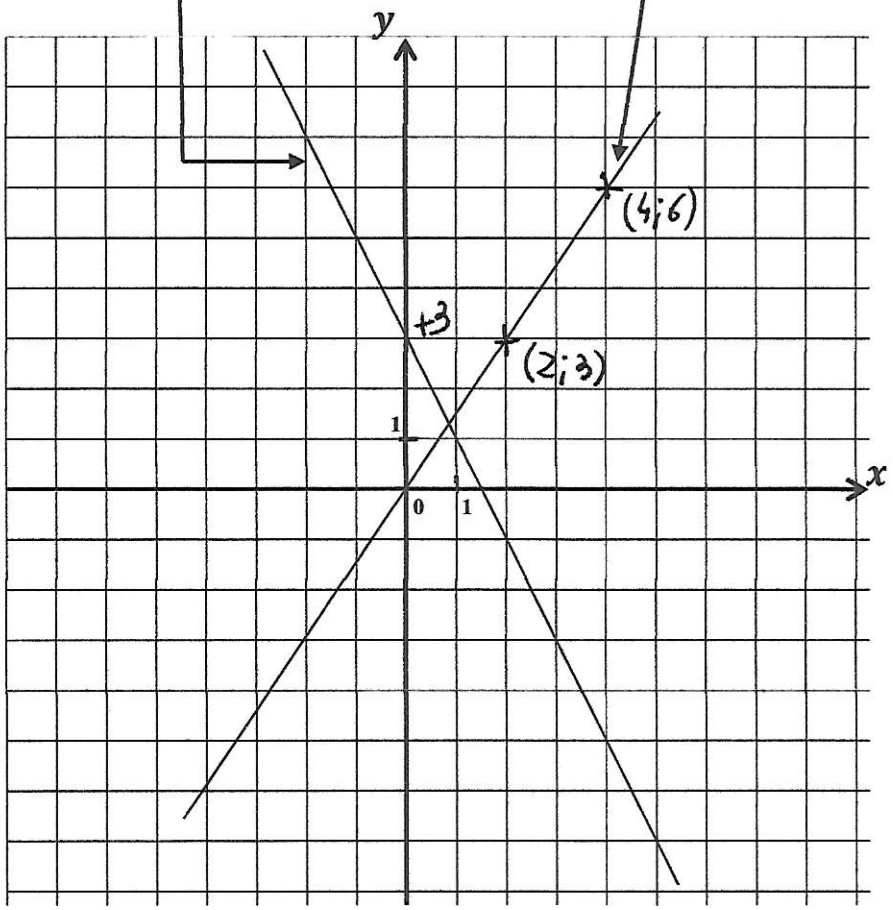
$4 \times 0 - 3 = -3$ $4x = 8$ $x = 2$

2



2)

- g(x) = $-2x + b$ h(x) = ax



g(x) : **b =?** 3 1

g(x) = = $-2x +$ 3 ? 0,5

h(x) : **a = ?** $\frac{3}{2}$ ou 1,5

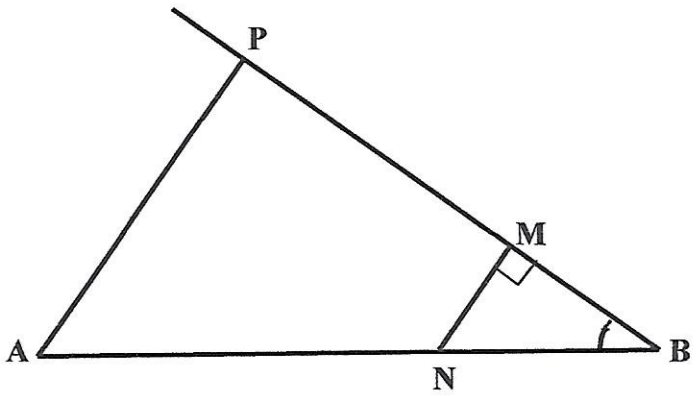
$a = \frac{6-3}{4-2} = \frac{3}{2} = 1,5$ } 1,5

h(x) = 1,5 x ? 0,5

ou $\frac{3}{2}x$

3

[AB] = 9 cm; [BN] = 3 cm; [BM] = 2,4 cm
(PA) // (MN)



a) [MN] ?

$BN^2 = BM^2 + MN^2$ $\quad MN^2 = 3,24$

$3^2 = 2,4^2 + MN^2$

$MN^2 = 3^2 - 2,4^2$ $\quad MN = \sqrt{3,24} = 1,8$

$MN^2 = 9 - 5,76$

2

MN = 1,8

b) $\widehat{NBM}$? (sin ? cos ? tan ?)

$\cos \hat{B} = \frac{BM}{BN} = \frac{2,4}{3} = 0,8$

$\hat{B} = 36,86° \simeq 37°$

2

$\widehat{NBM}$ = 37°

c) [AP] ?

$\frac{BN}{BA} = \frac{BM}{BP} = \frac{MN}{PA}$ $\quad PA = \frac{9 \times 1,8}{3}$

$\frac{3}{9} = \frac{2,4}{BP} = \frac{1,8}{PA}$ $\quad PA = 5,4$

2

AP= 5,4