

EXERCICE 5A.1

On donne ci-contre la courbe (parabole) qui représente la fonction $A : x \mapsto x^2$.

Retrouver parmi les expressions suivantes la fonction polynôme (sous forme factorisée quand c'est possible) qui correspond à chaque courbe.

$A(x) = x^2$

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

$C(x) = 2(x - 1)(x - 3)$

$D(x) = x^2 + 2$

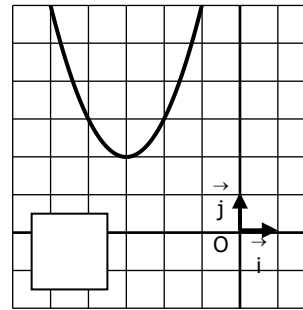
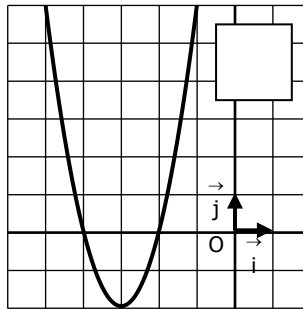
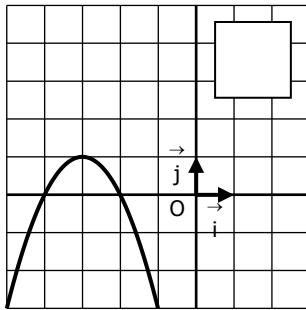
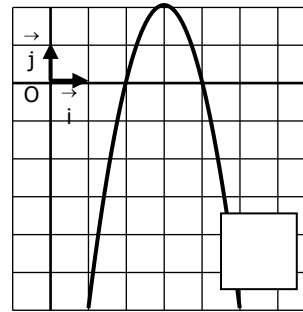
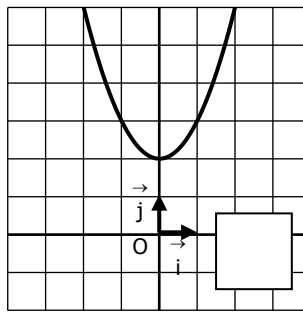
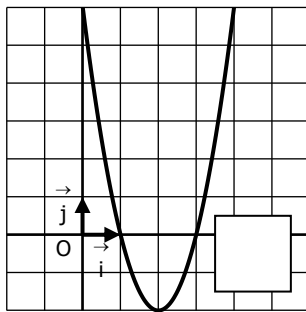
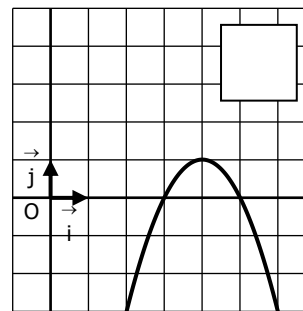
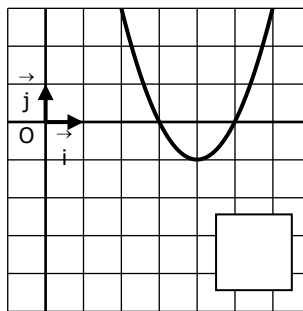
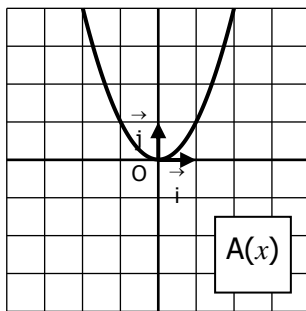
$E(x) = -2(x - 2)(x - 4)$

$F(x) = 2(x + 4)(x + 2)$

$G(x) = (x - 3)(x - 5)$

$H(x) = (x + 3)^2 + 2$

$I(x) = -(x - 3)(x - 5)$



EXERCICE 5A.2

Retrouver parmi les expressions suivantes la fonction polynôme (sous forme canonique) qui correspond à chaque courbe.

$A(x) = 2(x - 2)^2 - 2$

$B(x) = (x - 4)^2 - 1$

$C(x) = 2(x + 3)^2 - 2$

$D(x) = (x - 1)^2 + 2$

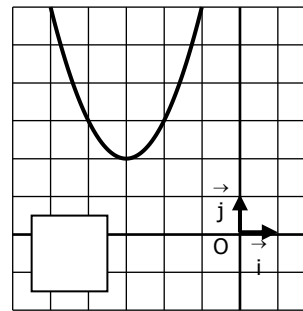
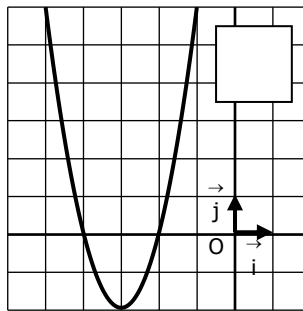
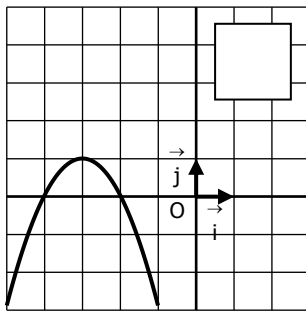
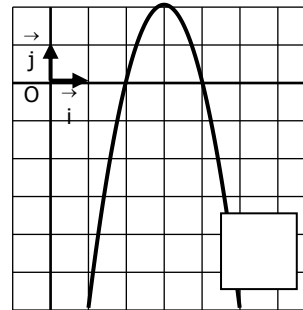
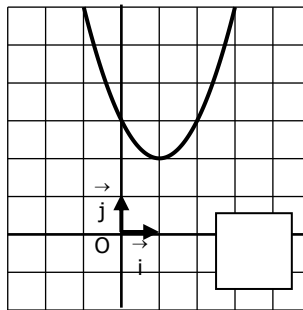
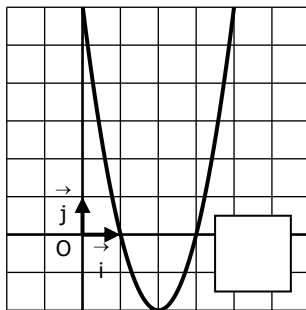
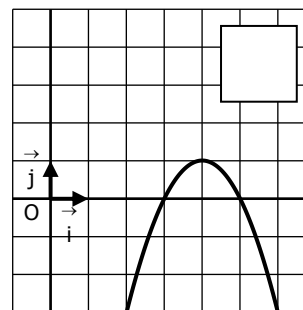
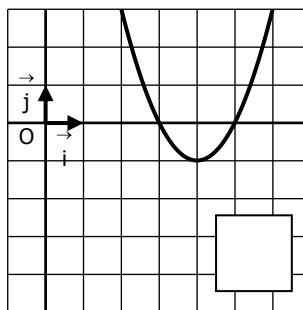
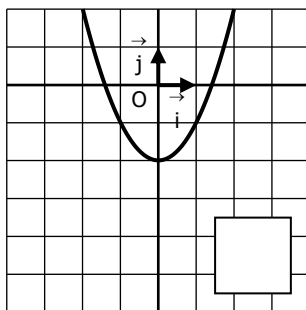
$E(x) = -2(x - 3)^2 + 2$

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

$G(x) = (x + 3)^2 + 2$

$H(x) = -(x - 4)^2 + 1$

$I(x) = x^2 - 2$



CORRIGE – NOTRE DAME DE LA MERCI – Montpellier

EXERCICE 5A.1

On donne ci-contre la courbe (parabole) qui représente la fonction $A : x \mapsto x^2$.

→ il faut identifier les racines de chaque polynôme

$$A(x) = x^2$$

$$B(x) = -(x + 4)(x + 2) \rightarrow -4 \text{ et } -2$$

$$C(x) = 2(x - 1)(x - 3) \rightarrow 1 \text{ et } 3$$

$$D(x) = x^2 + 2 \rightarrow \text{aucune racine}$$

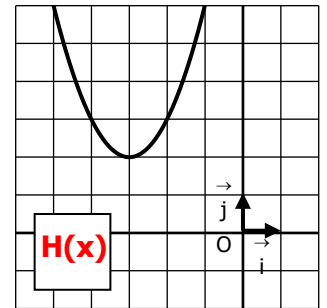
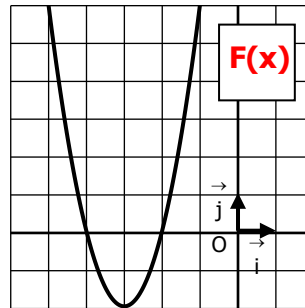
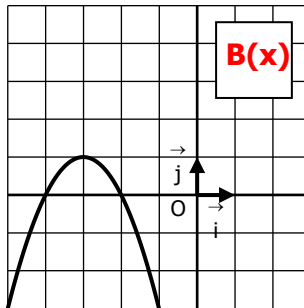
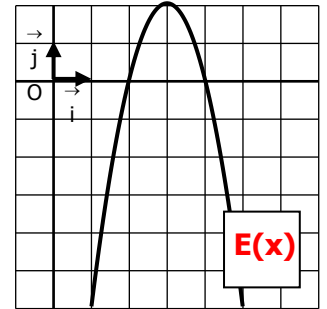
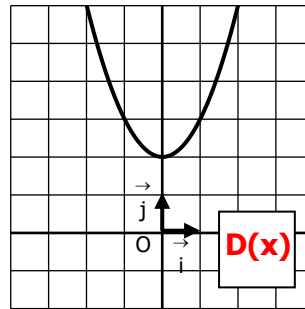
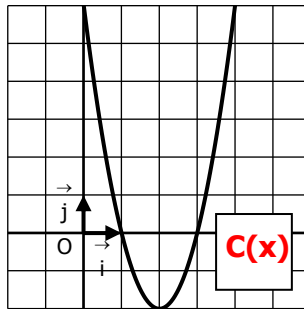
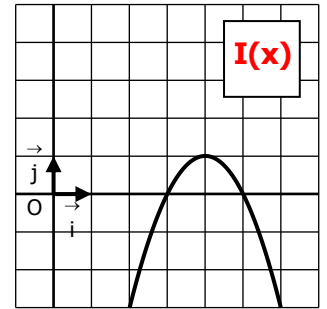
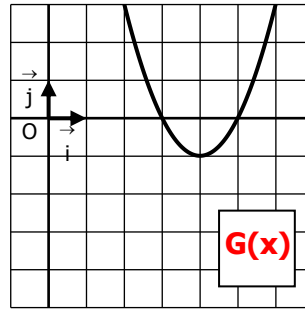
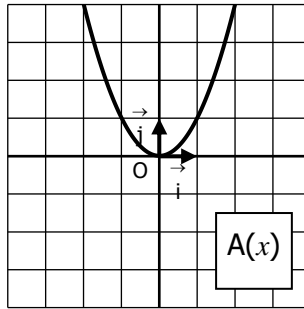
$$E(x) = -2(x - 2)(x - 4) \rightarrow 2 \text{ et } 4$$

$$F(x) = 2(x + 4)(x + 2) \rightarrow -2 \text{ et } -4$$

$$G(x) = (x - 3)(x - 5) \rightarrow 3 \text{ et } 5$$

$$H(x) = (x + 3)^2 + 2$$

$$I(x) = -(x - 3)(x - 5) \rightarrow 3 \text{ et } 5$$



EXERCICE 5A.2

$$A(x) = 2(x - 2)^2 - 2$$

→ orientée "vers le haut"

→ décalage horizontal de 2

→ décalage vertical de -2

$$B(x) = (x - 4)^2 - 1$$

→ orientée "vers le haut"

→ décalage horizontal de 4

→ décalage vertical de -1

$$C(x) = 2(x + 3)^2 - 2$$

→ orientée "vers le haut"

→ décalage horizontal de -3

→ décalage vertical de -2

$$D(x) = (x - 1)^2 + 2$$

→ orientée "vers le haut"

→ décalage horizontal de 1

→ décalage vertical de 2

$$E(x) = -2(x - 3)^2 + 2$$

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

$$G(x) = (x + 3)^2 + 2$$

$$H(x) = -(x - 4)^2 + 1$$

