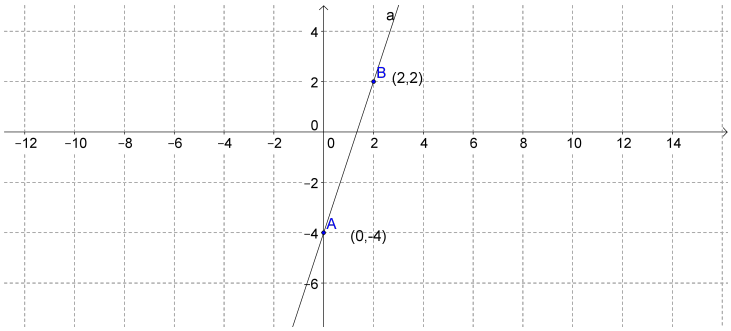
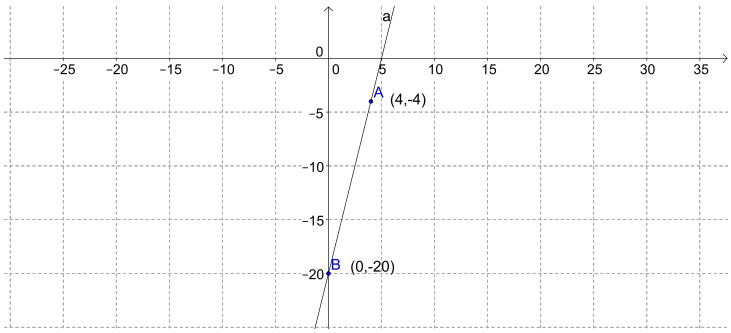
Functions

1. If $F(x) = bx + 4$, $F(3) = 13$. Find b
2. If $F(x) = ax - 3$, $F(5) = 7$. Find a
3. $(4, 2)$ is a point on the line $F(x) = ax - 8$. Find the value of a.
4. $(6, 3)$ is a point on the line $F(x) = ax + 15$. Find the value of a.
5. $F(x) = rx^2 + 3x + 1$ is a function. If $(-2, 7)$ is a couple of the function find the value for r
6. $F(x) = gx^2 - 2x - 4$ is a function. If $(3, -1)$ is a couple of the function find the value for g
7. The graph of the linear function $F(x) = 3ax + 2b$ is shown. Find values for a and b.



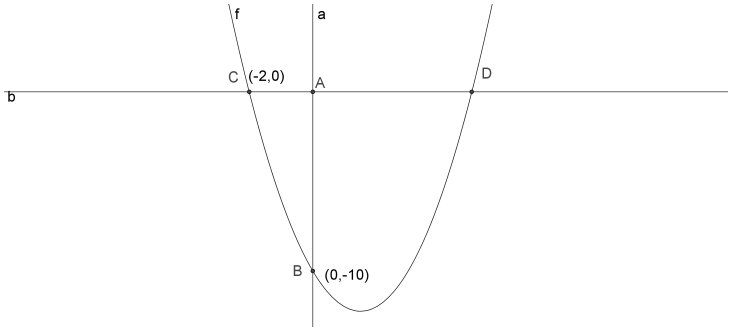
8. The linear function $Y = 2ax - 5b$ is shown in the graph. Find the values for a and b.



9. A function is defined by $3ax^2 - 2bx + 4$. If $F(4) = -124$ and $F(-1) = 6$, find the value for a and b.

10. A function is defined by $ax^2 + 3bx - 2$. If $F(-1) = -2$ and $F(7) = 166$, find the values for a and b.

11. The function $f(x) = x^2 + bx - c$ is shown on the graph.

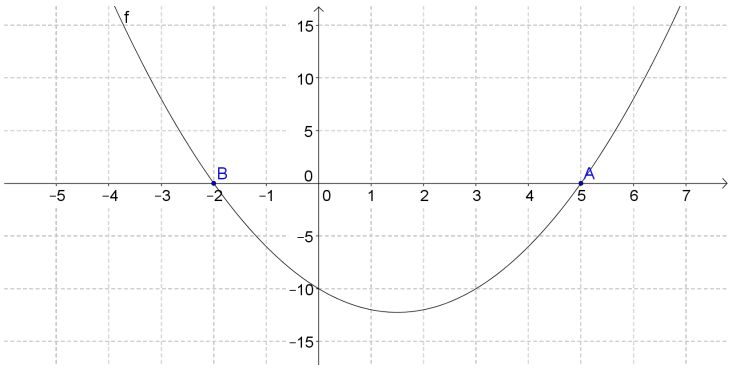


    i. Use $f(0)$ to find the value for c.

    ii. Use to graph to find another equation in b and c. Use this equation and the value for c found in (i) to find the value of b.

    iii. Using these values for b and c, solve the equation x^2+bx-c to find the coordinates of point d.

12. The diagram shows part of the graph of the function $f(x) = x^2 + bx + c$,



    The named couples are elements of the function.

    i. Find the values of b and c.

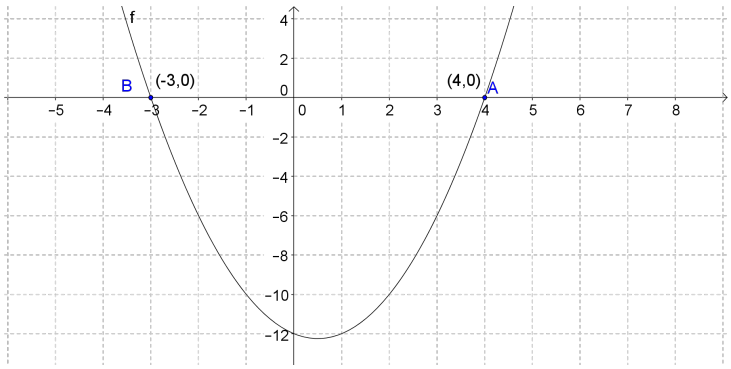
    ii. If $(2, y)$ is a point on the graph, find the value of y.

13. The diagram shows part of the graph of the function $f(x) = x^2 - bx + 2c$,

    The named couples are elements of the function.

    i. Find the values of b and c.

    ii. If $(-1, y)$ is a point on the graph, find the value of y.


f
B
(-3,0)
(4,0)
A