

National 5 Final Exam Practice

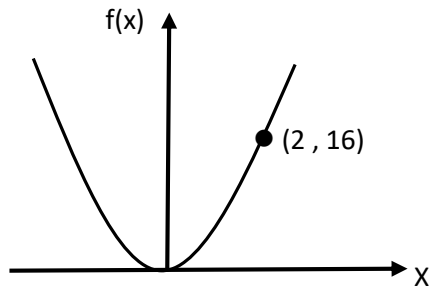
Algebraic Skills

Recognise Graphs of Quadratic Functions

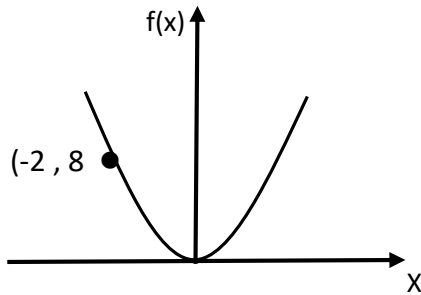
Average Allocation

2 / 3 Marks

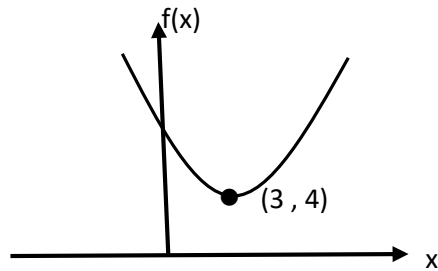
1. The graph below has equation  $f(x) = kx^2$ . Find the value of  $k$ .



2. The graph below has equation  $f(x) = ax^2$ . Find the value of  $a$ .

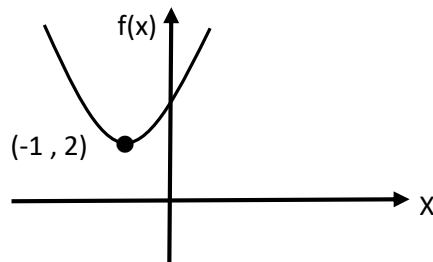


- 3a) The graph below has equation  $f(x) = (x - a)^2 + b$ . State the values of  $a$  and  $b$ .



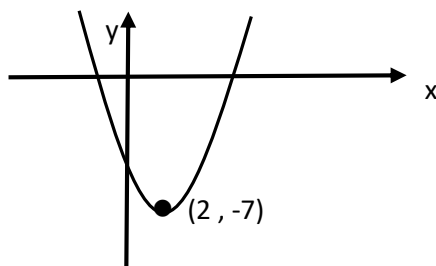
- 3b) State the equation of the axis of symmetry of the graph.

- 4a) The graph of the function  $f(x) = (x + a)^2 + b$  is shown below. State the values of  $a$  and  $b$ .



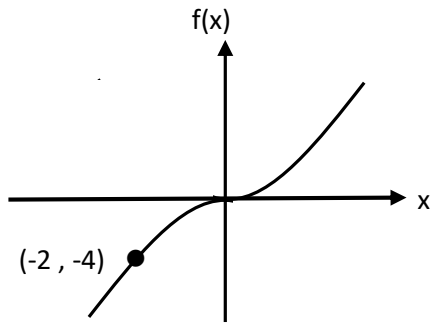
- 4b) State the equation of the axis of symmetry of the graph.

- 5a) The graph of the function  $f(x) = (x - a)^2 + b$  is shown below. State the values of  $a$  and  $b$ .

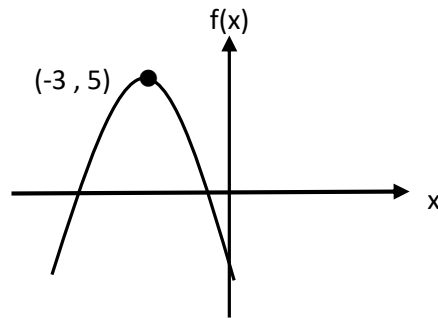


- 5b) State the equation of the axis of symmetry.

6. The graph of  $f(x) = kx^3$  is shown below. Find the value for  $k$ .



- 7a. The graph of  $f(x) = a - (x + b)^2$  is shown below. Find the values of  $a$  and  $b$ .



- 7b. State the equation of the axis of symmetry.

8. The graph below has equation  $y = ax^2 + b$ . Find the value of  $a$  and  $b$ .

