

**3rd Dec**

Corbettmaths

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

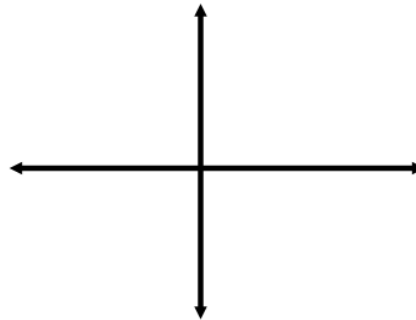
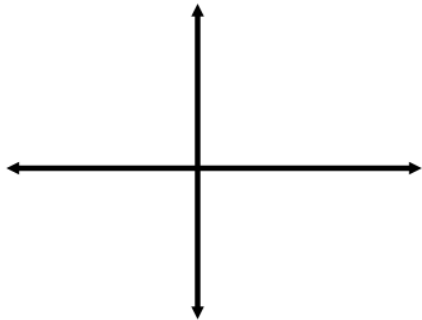
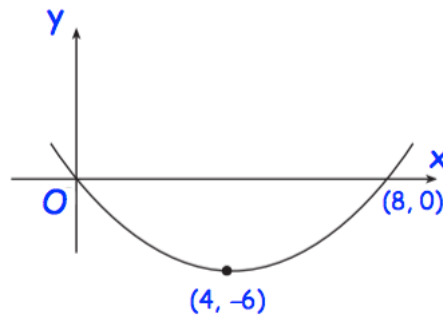
Find the value of the discriminant of  $f(x)$

Shown is  $y = f(x)$

Sketch

(a)  $2f(x)$

(b)  $f(2x)$



Express  $3x^2 + 18x + 1$   
in the form  $a(x + b)^2 + c$

A curve with equation  $y = f(x)$   
passes through the point  $(9, 16)$

Given that

$$f'(x) = \frac{1}{2}x^3 + 6x^{-\frac{1}{2}} + 1$$

Find  $f(x)$