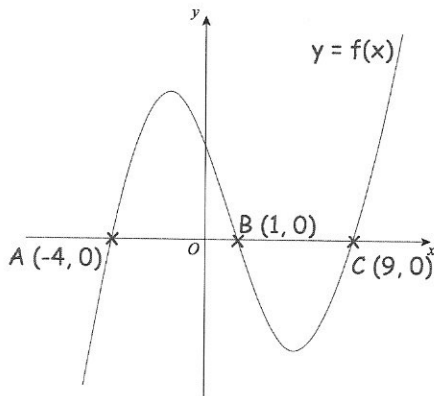
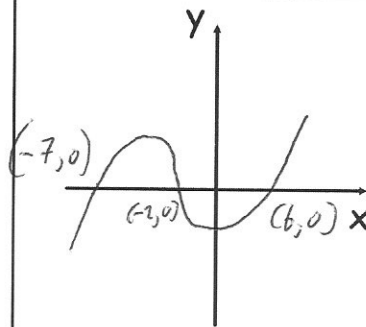
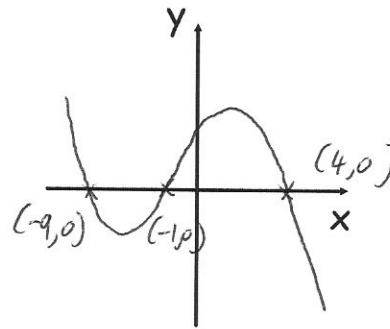




Shown is the graph $y = f(x)$



Sketch
 (a) $y = f(-x)$ (b) $y = f(x + 3)$ *left*



For all values of x

$$f(x) = x^2 + 5 \quad (x-4)^2 + 5 = x^2 + 5 - 4$$

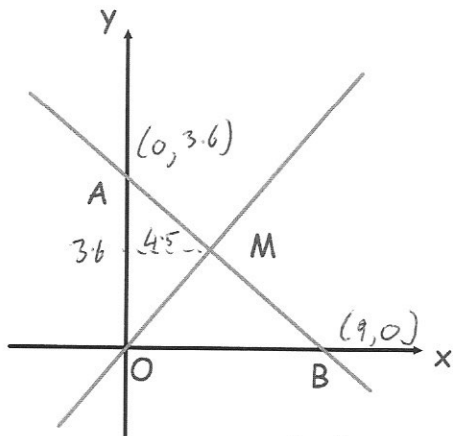
$$g(x) = x - 4 \quad x^2 - 8x + 21 = x^2 + 1$$

$$-8x = -20$$

$$8x = 20$$

$$x = 2.5$$

Solve
 $fg(x) = gf(x)$



M is the midpoint of AB
 The line l_1 passes through the points A and B . It has equation $2x + 5y = 18$.
 $\Rightarrow y = -\frac{2}{5}x + \frac{18}{5}$
 The line l_2 passes through the origin, O , and M .

Find the equation of line l_2

~~...~~ $m(4.5, 1.8)$

$$y = \frac{2}{5}x$$

Find the area of triangle OAM .

$$\frac{1}{2} \times 3.6 \times 4.5 = 8.1$$