



# SPTA

## N5 Homework

### Quadratics 2 (A)

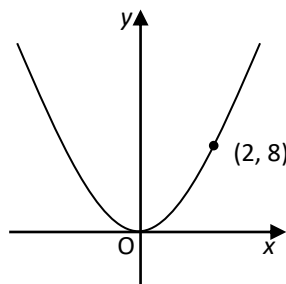


Show all working - Calculator NOT required

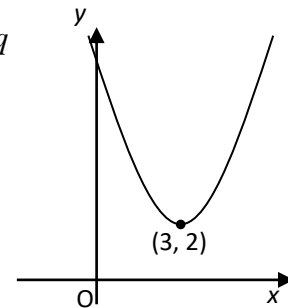
Marks

1. Write down the equation of each graph below in the form given:

a)  $y = kx^2$



(b)  $y = (x + p)^2 + q$



(4)

2. Sketch the graphs of these showing clearly any intercepts with the axes and the turning point.

a)  $y = (x - 4)(x + 2)$

(b)  $y = -x^2 + 11x - 28$

(7)

3. For the quadratic function  $y = 3 - (x + \frac{1}{2})^2$ , write down

a) its turning point and the nature of it.

(2)

b) the equation of the axis of symmetry of the parabola.

(1)

4. i) Express the following expressions in the form  $a(x + b) + c$

ii) State their turning points.

a)  $x^2 - 6x + 10$

(b)  $x^2 + 12x + 28$

(6)

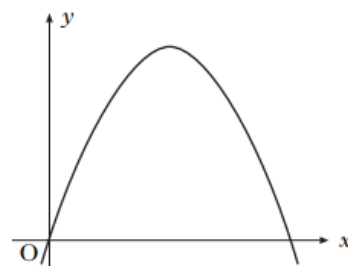
5. The graph below is part of the parabola with equation  $y = 8x - x^2$

a) Write down the coordinates of the roots.

(3)

b) State the coordinates of the turning point.

(2)



Total Marks: 25