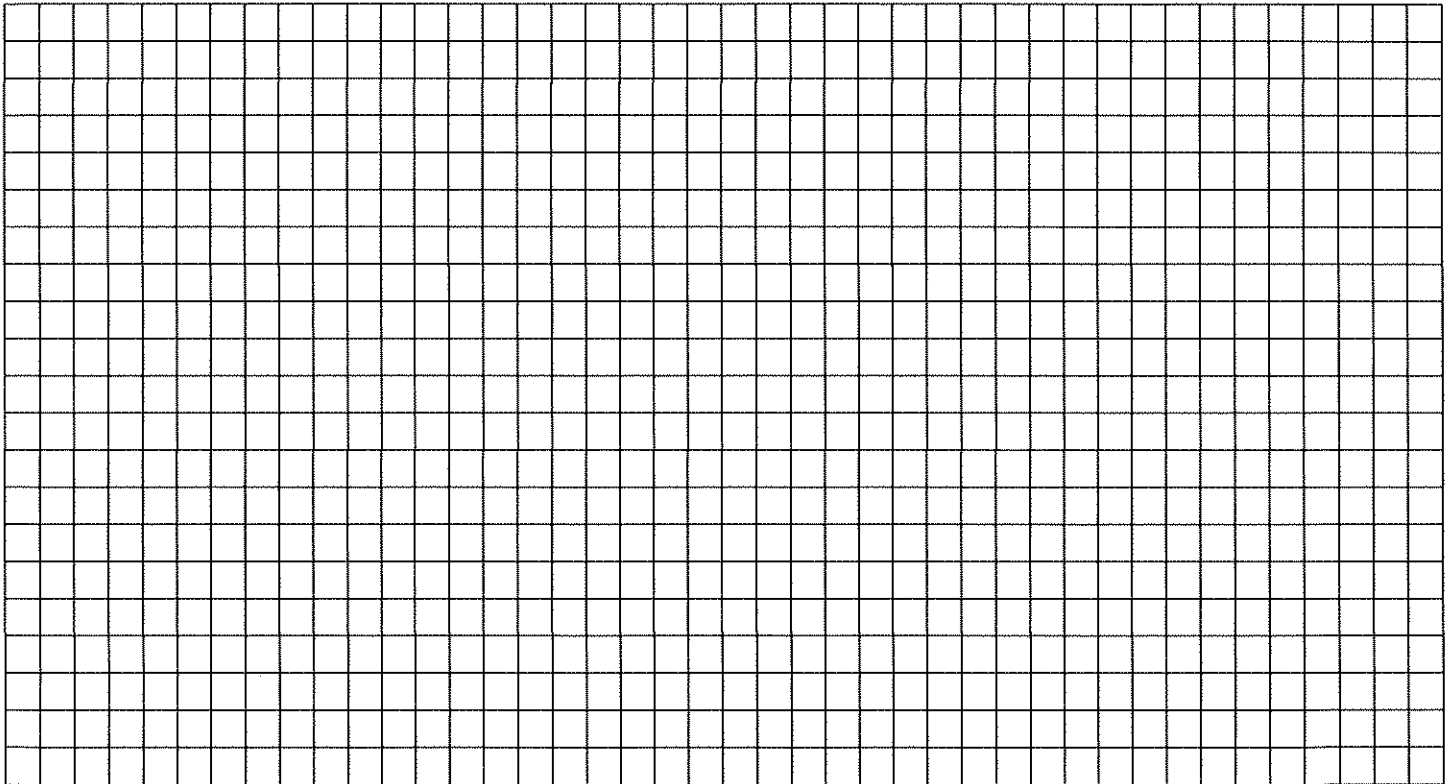
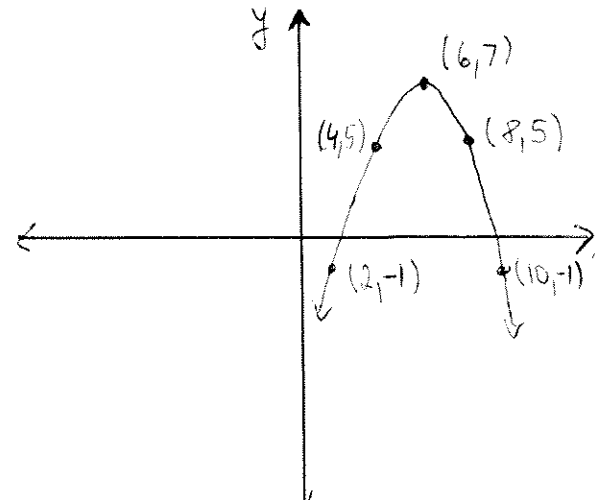


[4] 1. Describe all transformations that took place if the equation of a parabola $y = x^2$ is now $y = -4(x - 3)^2 + 1$.

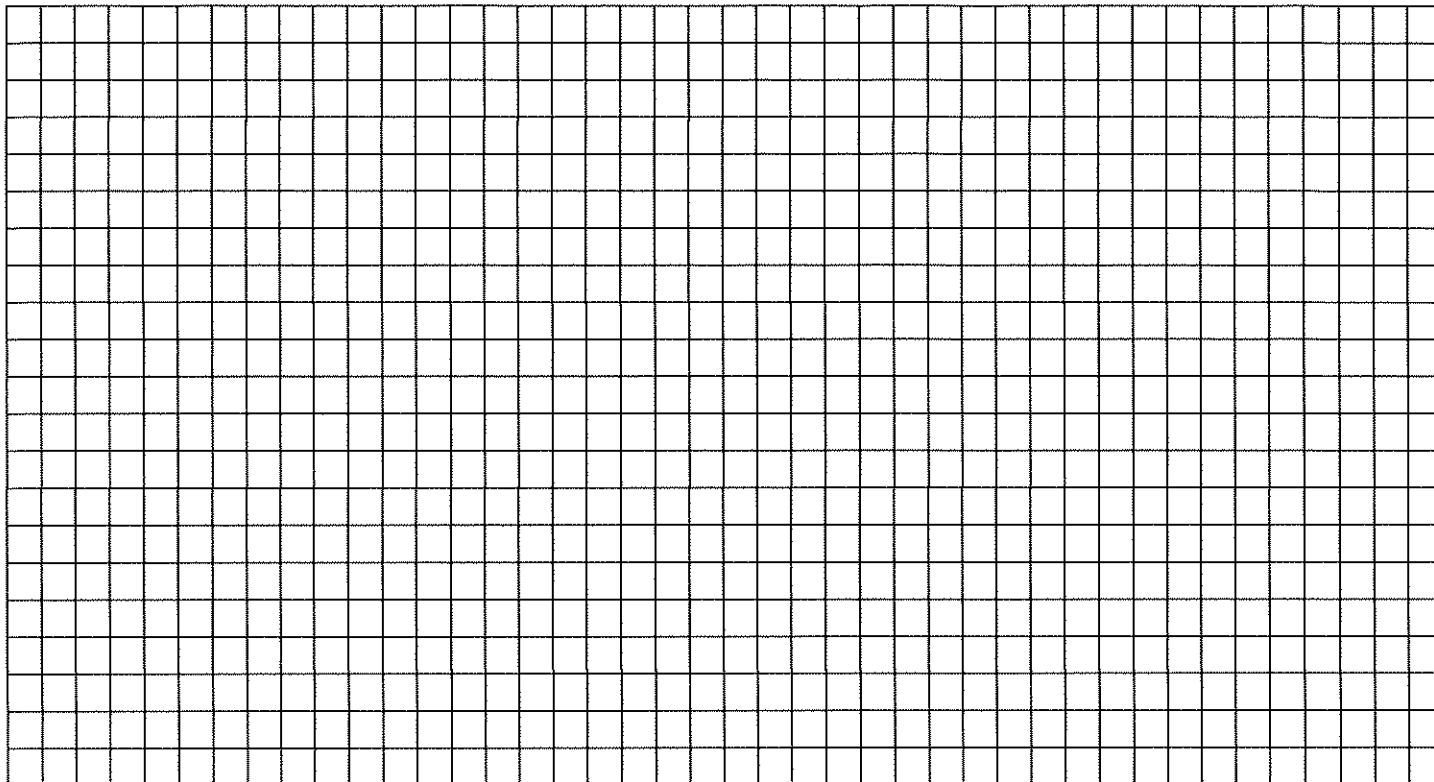
[4] 2. Graph $y = 2(x - 4)^2 - 3$. Remember to label all axes and draw arrows where appropriate. At least 5 points on your graph have to be exact.



[4] 3. Write the equation of the quadratic function graphed below:



[15] 4. Graph $y = -0.5(x + 4)^2 + 5$. At least 5 points on your graph have to be exact.



Fill in the following information about the graph above:

- Coordinates of the vertex: _____

- Coordinates of the **exact** x-intercepts if they exist: _____

- Coordinates of the y-intercept: _____

- Equation of the axis of symmetry: _____

- Determine whether the function have a maximum or minimum _____ and give its value: _____

- Domain: _____

- Range: _____