

Please attempt the following questions in preparation for the online session on 26th October 2017.

Q1

P and Q have coordinates $(-1,p)$ and $(-7,2)$ respectively.
 PQ is parallel to the line with equation $3y = 2x + 5$
 Find the value of p .

Q2

E, F and G are points such that EF is parallel to the line with equation $y - x = 0$ and FG makes an angle of 120° with the positive direction of the x -axis.
 Are the points E, F and G collinear?

Q3

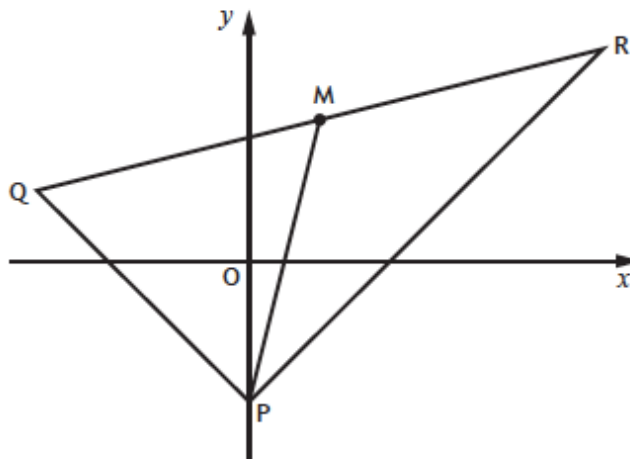
What is the equation of the line passing through the point $(2,5)$ which is parallel to the line with equation $y + 2x = 3$?

Q4

T $(-3,5)$, U $(7,9)$ and V $(2,11)$ are the vertices of a triangle.
 Find the equation of the altitude through V.

Q5

PQR is a triangle with vertices P $(0,-4)$, Q $(-6,2)$ and R $(10,6)$.



- Find the equation of PM, the median through P.
- Find the equation of L, passing through M and perpendicular to PR.
- Show that the line L passes through the midpoint of PR.

Q6

ABC is a triangle with vertices A $(10,7)$, B $(3,0)$ and C $(9,-2)$.
 Find the equation of the perpendicular bisector of BC.