



SPTA

Higher Homework

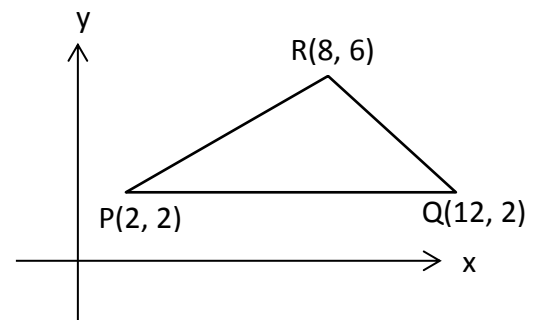
Straight Line (B)



1. Show that the points $A(4, 7)$, $B(1, 1)$ and $C(-2, -5)$ are collinear. (2)
2. Find the equation of the line:
 - (a) through $(6, 1)$ and parallel to $y = 4x - 8$
 - (b) through $(-9, 2)$ and perpendicular to $x + y = 7$
 - (c) perpendicular to $3x + y = -6$ and passing through the origin(6)
3. Show that the lines $5x - 2y + 3 = 0$ and $20x - 8y + 7 = 0$ are parallel. (2)
4. Find the size of the angle that the line joining the points $C(-4, 2)$ and $D(4, -2)$ makes with the positive direction of the x-axis (2)

5. Triangle ABC has vertices $P(2, 2)$, $Q(12, 2)$ and $R(8, 6)$

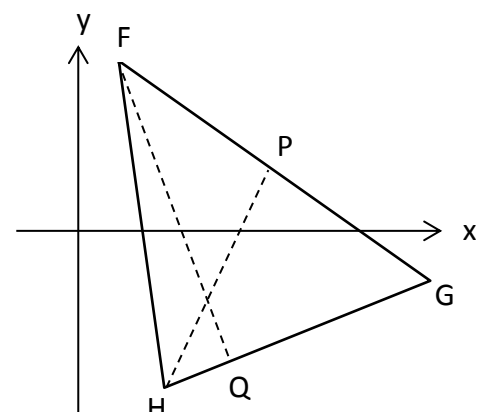
- (a) Write down the equation of l_1 , the perpendicular bisector of PQ
- (b) Find the equation of l_2 , the perpendicular bisector of PR
- (c) Find the point of intersection of lines l_1 and l_2 .



6. $F(1, 7)$, $G(11, -3)$ and $H(2, -6)$ are the vertices of triangle FGH

The median from H meets FG at P and the altitude from F meets HG at Q

Find the coordinates of the point of intersection of HP and FQ



(5)

(8)