

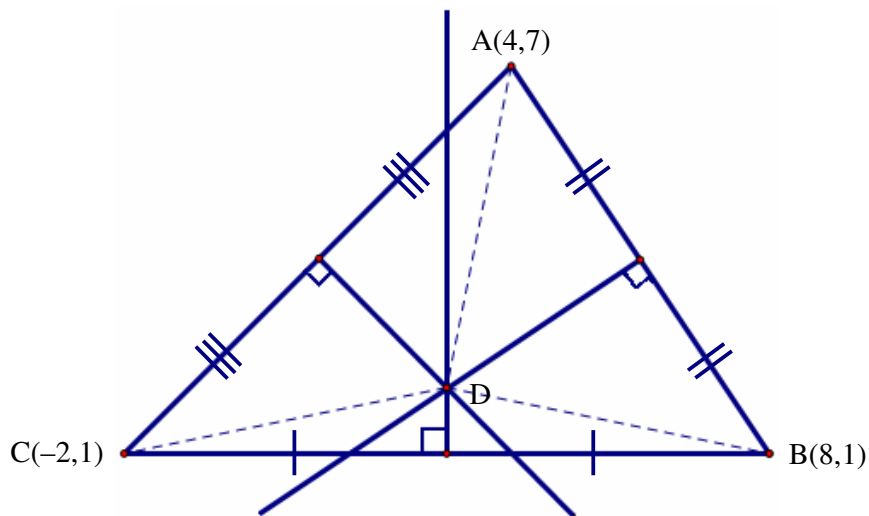
- 1 Find the equation of the straight line which passes through the point $(-1,2)$ and is:
 - (a) parallel to the line with equation $x = 2$
 - (b) perpendicular to the line with equation $y + 3x = 0$
 - (c) parallel to the line with equation $y - \frac{2}{3}x = 4$

- 2 Find the equation of the perpendicular bisector of the line joining $P(2,3)$ and $Q(8,-1)$.

- 3 Find the equation of the median AD of the triangle ABC where the coordinates of A , B and C are $(-3,2)$, $(-4,-3)$ and $(4,1)$ respectively.

- 4 $D(-2,6)$, $E(0,-3)$ and $F(11,2)$ are the vertices of a triangle DEF . Find the equation of FG , the altitude from F to DE .

- 5 The perpendicular bisectors of the sides of a triangle are concurrent at a point which is equidistant from the vertices. i.e. $AD = BD = CD$. This point is called the circumcentre.



By solving the equations of two of the perpendicular bisectors, determine the coordinates of point D the circumcentre of triangle ABC .