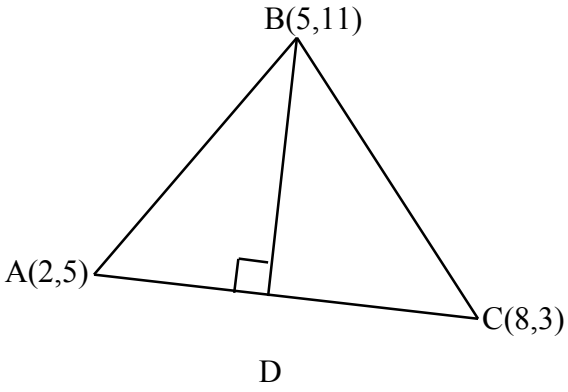
Equation of a Line

Altitudes

1. The diagram shows a triangle ABC with vertices

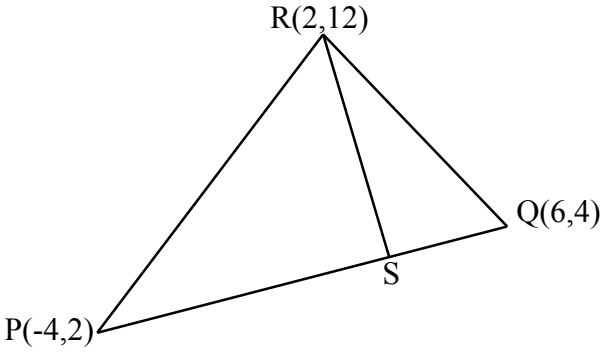
   A(2,5), B(5,11) and C(8,3).

   Find the equation of the altitude BD.



2. A triangle has vertices P(-4,2), Q(6,4) and R(2,12).

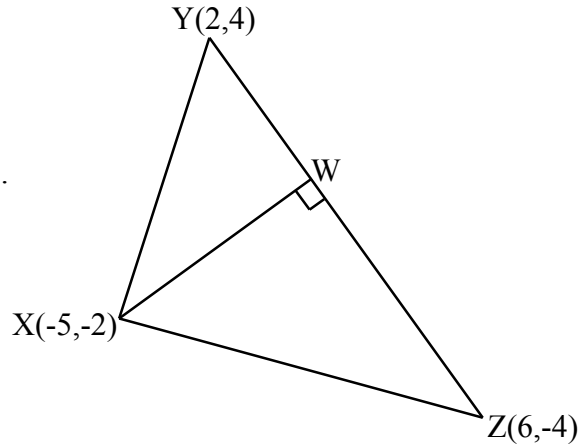
   Find the equation of the altitude RS.



3. Triangle KLM has vertices K(2,-8), L(5,3) and M (8,0).

   Find the equation of the altitude drawn from L.

4. Find the equation of the altitude WX in the diagram opposite.

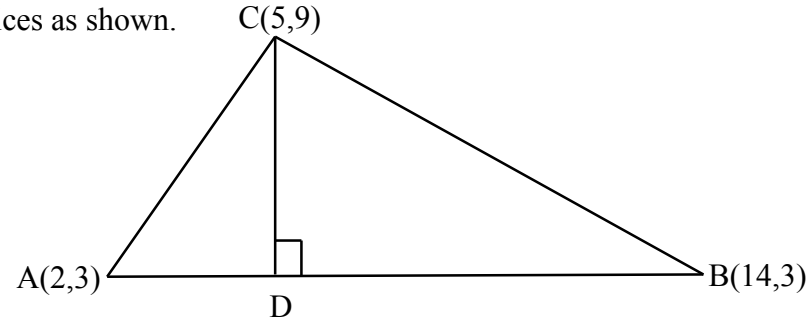


5. A triangle has vertices E(-1,4), F(5,0) and G(-4,-5).

   Find the equation of the altitude drawn from F.

6. The diagram shows triangle ABC with vertices as shown.

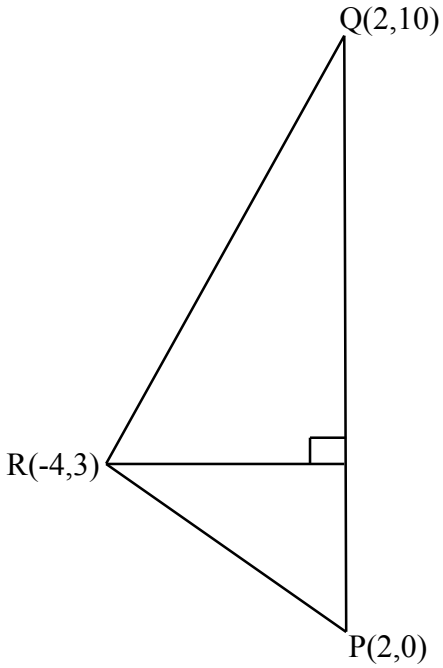
   Find the equation of the altitude CD.



7. Triangle PQR has vertices P(2,0), Q(2,10) and R(-4,3).

   An altitude is drawn from R to the line PQ.

   Find the equation of this altitude.



8. A triangle KLM has vertices K(3,5), L(11,5) and M(7,-2).

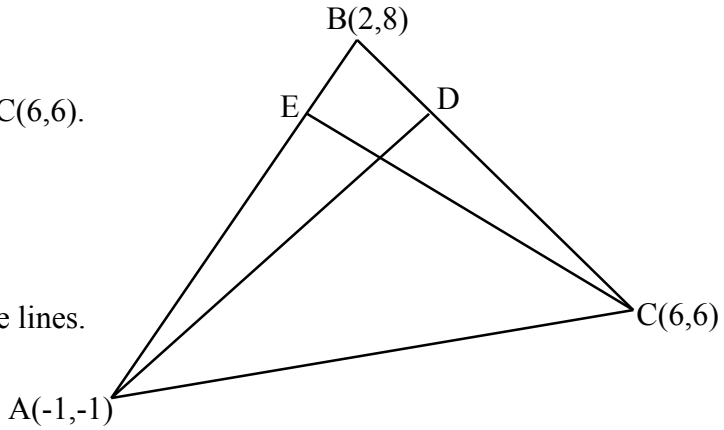
   Find the equation of the altitude drawn from the point M to the line KL.

9. A triangle ABC has vertices A(-1,-1), B(2,8) and C(6,6).

   (a) Find the equation of the altitude AD.

   (b) Find the equation of the altitude CE.

   (c) Hence find H, the point of intersection of these lines.



10. A triangle GHK has vertices G(2,-1), H(3,2) and K(6,-1).

    (a) Find the equation of the altitude from the point H.

    (b) Find the equation of the altitude from the point K.

    (c) Find the point of intersection of these lines.