## Equation of a line

## Medians

1. The diagram shows triangle $A B C$ with vertices $\mathrm{A}(2,5), \mathrm{B}(5,8)$ and $\mathrm{C}(12,-1)$.

Find the equation of the median from B.

2. A triangle has vertices $P(0,-4), Q(7,3)$ and $R(-3,7)$.

Find the equation of the median from P to the line QR .
3. A triangle has vertices $\mathrm{D}(4,6), \mathrm{E}(9,-1)$ and $\mathrm{F}(3,1)$.

Find the equation of the median drawn from D.

4. HJK is a triangle with vertices $\mathrm{H}(-6,-2)$, $J(4,5)$ and $K(8,-6)$.

Find the equation of the median JT.

5. A triangle has vertices $\mathrm{M}(4,1), \mathrm{N}(2,9)$ and $\mathrm{P}(-6,-7)$.

Find the equation of the median from N .
6. OThe diagram shows a triangle ABC .

Find the equation of the median AD .

7. A triangle has vertices $\mathrm{M}(-6,-3), \mathrm{N}(4,5)$ and $\mathrm{P}(10,-11)$.

0 Find the equation of the median from M to NP .
8. Find the equation of the median XW in triangle XYZ.

9. A triangle has vertices $\mathrm{A}(1,1), \mathrm{B}(3,5)$ and $\mathrm{C}(11,1)$.
(a) Find the equations of the medians AD and BE .
(b) AD and BE intersect at M . Find the coordinates of M .

10. PQR is a triangle with $\mathrm{P}(4,1), \mathrm{Q}(8,1)$ and $\mathrm{R}(6,-2)$.
(a) Find the equation of the median from R.
(b) Find the equation of the median from P .
(c) Find the coordinates of the point of intersection of these lines.

