

- d Find the coordinates of P and Q such that $\vec{AP} = 2\vec{PB}$ and $\vec{AQ} = -2\vec{QB}$.

Without calculating them, decide which vector has greater magnitude, \vec{AB} or \vec{PQ} .

- 3 Show that the points P(4, -1), Q(6, -3) and R(2, 1) are collinear.

- 4 Find the value of a such that the points A(a , $a - 1$), B(2, $2a$) and C(0, $3a$) are collinear.

- 5 Show that the points $S(2, -3)$, $U(-1, 2)$ and $N(1, -4)$ define a triangle.

Three points define a triangle when they are NOT collinear.

- 6 Show that if $P(a, b)$, $Q(c, d)$, $R(e, f)$ and $\frac{f-b}{d-b} = \frac{e-a}{c-a}$, then P , Q and R are collinear points.

Homework
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