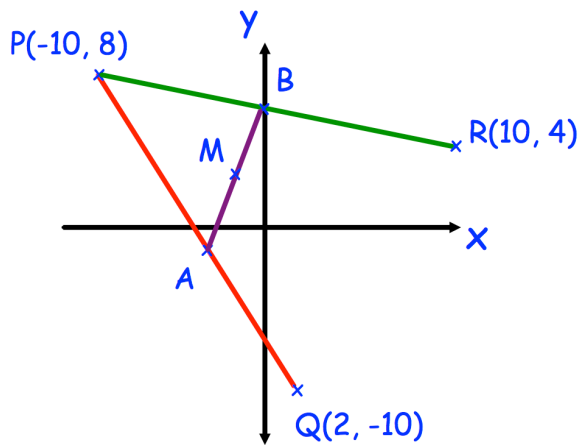


18th July



Corbettmaths



Find the coordinates of the point M

A is the midpoint of the line PQ.
 B is the midpoint of the line PR.
 M is the midpoint of the line AB.

$$\mathbf{A} = \begin{pmatrix} 5 & -3 \\ -2 & 7 \end{pmatrix}$$

Work out the matrix $7\mathbf{A}$

Prove
 $\sin^2 x - 2\cos^2 x \equiv 3\sin^2 x - 2$

Hence, work out the values of x
 between 0° and 360° for which

$$\sin^2 x - 2\cos^2 x = 0$$