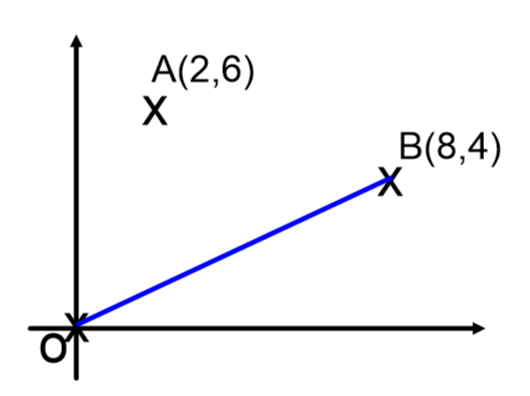
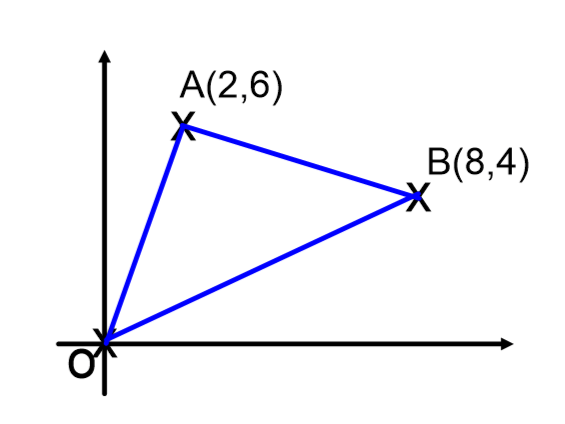
****Worksheet L: Building a picture

Show that OB is the diameter of the circle that passes through O(0,0); A(2,6) and B(8,4).

* Draw the information given



* Think about what would need to be the case for OB to be the diameter

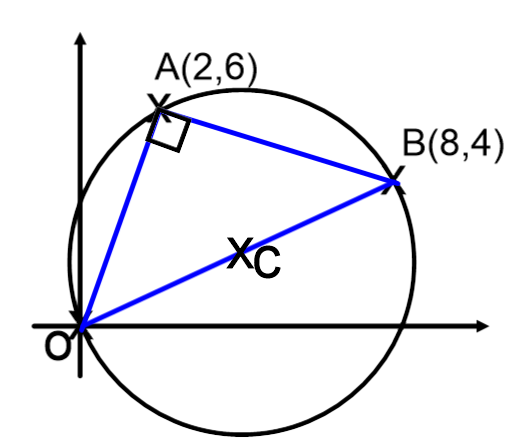


Two chords off the diameter meet at a right angle on the circumference:

OA and AB must be perpendicular

→ the need to find the gradients of each line segment

****Worksheet L: Building a picture continued



Gradient OA is 3

Gradient AB is

∴ product of gradients is -1 so perpendicular and angle OAB is 90 degrees,

∴ OAB is the angle in a semi-circle where OB is the diameter.

What else could you find?

The equation of the diameter OB

The equation of the circle.

* Centre,C, is midpoint of OB
* To find the radius there is a choice of OC or CB or half of OB