

# Summer Term Maths Year 10

Day  
**4**

Week 11

Use Pythagoras' Theorem to find the length of a line segment

**1** Calculate each of the following.

- a)  $(5 - 1)^2$       c)  $(1 - (-5))^2$   
b)  $(1 - 5)^2$       d)  $((-5) - 1)^2$

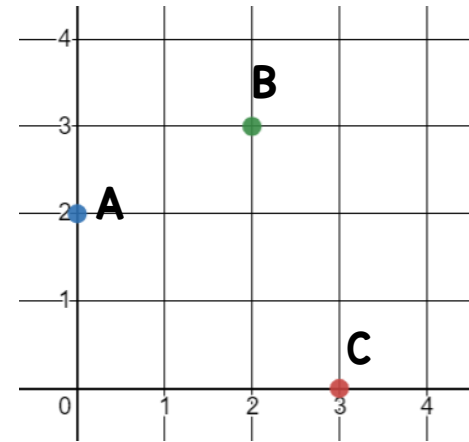
**2** Calculate each of the following to 2 decimal places.

- (a)  $\sqrt{4^2 + 1^2}$   
(b)  $\sqrt{4^2 + (-1)^2}$   
(c)  $\sqrt{(4 - 2)^2 + (1 - (-2))^2}$

**3** Find the coordinates of the points described.

- a) 4 left and 3 up from (3, 7)  
b) 4 left and 3 up from (-3, 7)

**4**



- a) Find the lengths OA and OC.  
b) Use Pythagoras' theorem to find the exact length of AC.  
c) Find the length of AB to 3 significant figures.  
d) Find the perimeter of the quadrilateral OABC to 3 significant figures.

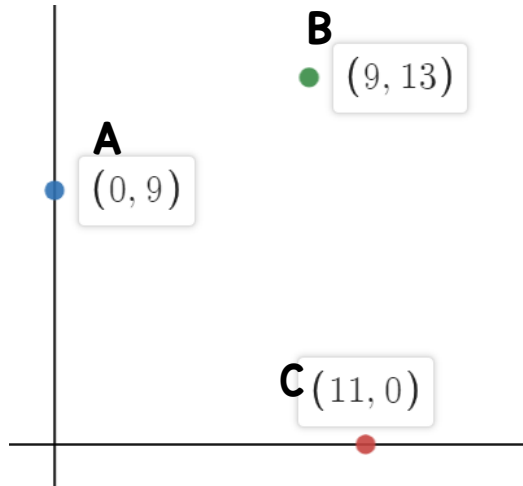
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5



- Find the distance from the origin to the point B to 3 significant figures.
- Find the perimeter of the triangle AOC, where O is the origin.
- Find the distance between the point  $(-2, 0)$  and the point A.

6

Find the distance between each pair of points.

- $(0, 0)$  and  $(4, q)$
- $(2, 0)$  and  $(4, q)$
- $(-2, 0)$  and  $(4, q)$
- $(-2, -2)$  and  $(4, q)$

7

The points A and B both on the line  $y = 3x - 8$  A has x-coordinate 3 and B has x-coordinate  $-4$

Find the distance between A and B.