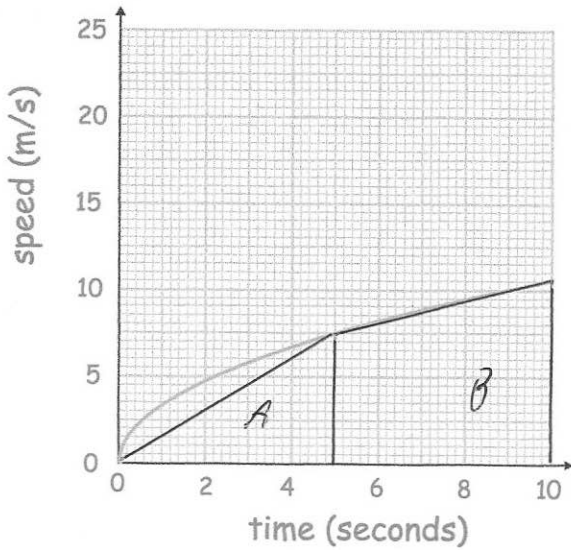


10th August



Corbettmaths



Shown is the first 10 seconds of the journey of a car

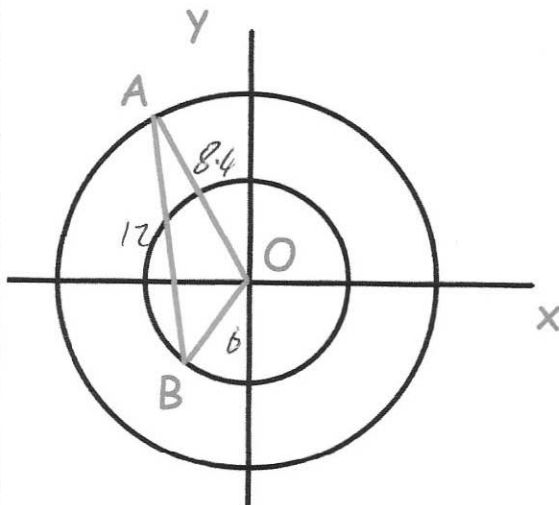
Work out an estimate for the distance the car travels in these 10 seconds

(A)  $\frac{1}{2} \times 5 \times 7.5 = 18.75$   
 (B)  $\frac{1}{2} (7.5 + 10.5) \times 5 = 45$   
 63.75m

Is your answer an underestimate or an overestimate?

Explain your answer.

*Underestimate as the area for A (and slightly B) are below the actual line.*



A is a point on a circle.  
 B is a point on another circle with equation  $x^2 + y^2 = 36$

radius of the smaller circle : radius of the large circle is 5 : 7

$AB = 12$

Work out the size of angle AOB

$$\boxed{111.8^\circ}$$
  

$$\cos AOB = \frac{8.4^2 + b^2 - 12^2}{2 \times b \times 8.4}$$

Given

$(ax + b)(x + 4)(x + c) \equiv 2x^3 + 19x^2 + 49x + 20$

Find a, b and c

$a = 2$   
 $b = 1$   
 $c = 5$