9th November **Higher Plus 5-a-day**

Corbettmaths

Solve

$(2x-3)^2 = 6x^2 - 5x + 5$

$(2x-3)(2x-3) = 6x^2 - 5x + 5$

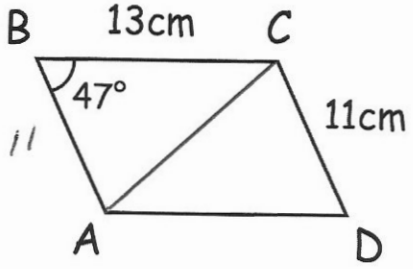
$4x^2 - 12x + 9 = 6x^2 - 5x + 5$

$0 = 2x^2 + 7x - 4$

$0 = (2x-1)(x+4)$

$x = \frac{1}{2}$ or $x = -4$

ABCD is a parallelogram.

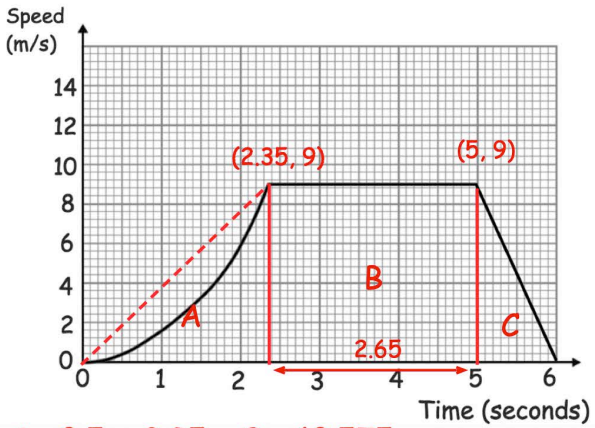


Find the area of the parallelogram.

$\frac{1}{2} \times 11 \times 13 \times \sin 47 = 52.2917...$

$104.58 cm^2$

The graph below shows the speed of a bicycle.



A: 0.5 x 2.35 x 9 = 10.575m

B: 2.65 x 9 = 23.85m

C: 0.5 x 1 x 9 = 4.5m

Estimate the total distance travelled.

Answer may vary due to how area is found

10.575 + 23.85 + 4.5 = 38.925m

Is your estimate an underestimate or overestimate?

Overestimate - as the chord (A) is above the curve.

Write $x^2 + 6x + 21$ in the form $(x + a)^2 + b$

$(x+3)^2 - 9 + 21$

$(x+3)^2 + 12$

Find the turning point of the graph $y = x^2 + 6x + 21$

$(-3, 12)$