24th October **Higher Plus 5-a-day**

Corbettmaths

Rationalise the denominator

$$\frac{2}{\sqrt{3}-1} \times \frac{(\sqrt{3}+1)}{(\sqrt{3}+1)} = \frac{2\sqrt{3}+2}{2}$$

$1+\sqrt{3}$

Express $3x^2 + 18x - 1$ in the form $a(x + b)^2 + c$

$3(x^2+6x)-1$

$3[(x+3)^2-9]-1$

$3(x+3)^2-27-1$

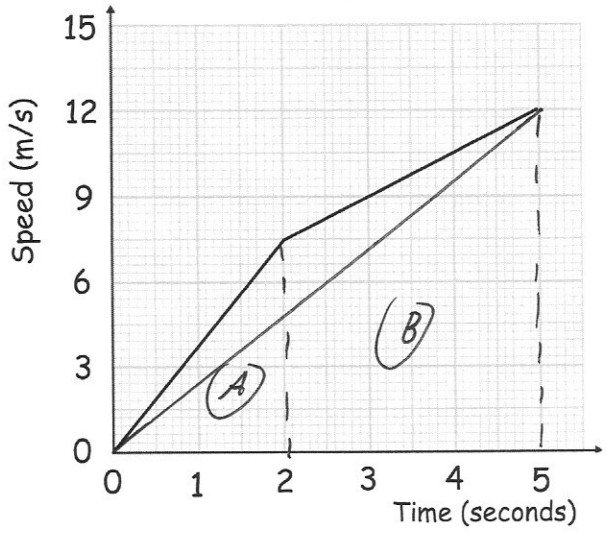
$3(x+3)^2-28$

The number y has been rounded to 1000 correct to one significant figure.

Write the error interval for y.

$950 \leq y < 1500$

A dog runs after a squirrel.
The graph below shows his speed.



How far did the dog run during the first 5 seconds?

(A) $\frac{1}{2} \times 2 \times 7.5 = 7.5m$

(B) $\frac{1}{2}(7.5+12) \times 3 = 29.25m$

$36.75m$

Work out the dog's average acceleration over the first 5 seconds.

$\frac{12}{5} = 2.4 m/s^2$