

18th June



Corbettmaths

Solve, giving your answers to one decimal place.

$$4x^2 + 4x + 1 = 0 \quad a=4 \quad b=4 \quad c=1$$

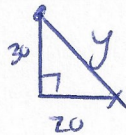
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-4 \pm \sqrt{16 - (16)}}{8}$$

$$x = \frac{-4 \pm 0}{8}$$

$$x = -0.5$$

A plane travels 20 miles West and then 30 miles North. How far, in a direct line, is the plane from its starting point?



$$20^2 + 30^2 = y^2$$

$$1300 = y^2$$

$$\sqrt{1300} = 36.0555 \text{ miles}$$

Simplify  $4\sqrt{3} \times 2\sqrt{3}$

$$8 \times \sqrt{9}$$

$$8 \times 3 = 24$$

Simplify  $\sqrt{48} \div \sqrt{12}$

$$\sqrt{4} = 2$$

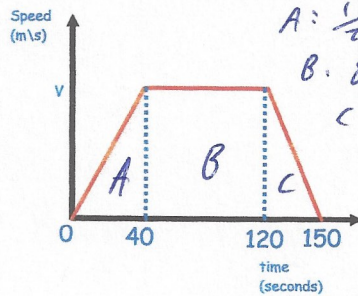
Shown is a speed-time graph. The total distance travelled is 1.15km

Find  $v$ .

$$A + B + C = 1150$$

$$115v = 1150$$

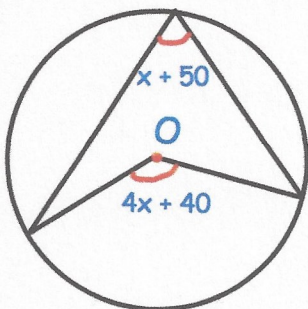
$$v = 10 \text{ m/s}$$



$$A: \frac{1}{2} \times 40 \times v = 20v$$

$$B: 80v$$

$$C: \frac{1}{2} \times 30 \times v = 15v$$



Find  $x$

$$\frac{1}{2} (4x + 40) = x + 50$$

$$2x + 20 = x + 50$$

$$x = 30^\circ$$