



Expand and simplify

$$(w + 4)(w + 9)$$

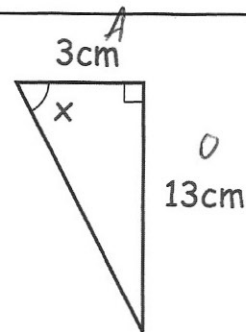
$$w^2 + 9w + 4w + 36$$

$$w^2 + 13w + 36$$

Find the size of angle x

$$\tan x = \frac{13}{3}$$

$$\tan^{-1}\left(\frac{13}{3}\right) = 77^\circ$$



Matthew is training for a race.  
He runs 3 days in one week.

Matthew runs  $1\frac{1}{2}$  miles on Monday.

Then he runs  $1\frac{2}{3}$  miles on Thursday.

Finally he runs  $2\frac{1}{5}$  miles on Sunday.

Work out how far Matthew ran in total.

$$\frac{3}{2} + \frac{5}{3} + \frac{11}{5}$$

$$\frac{45}{30} + \frac{50}{30} + \frac{66}{30} = \frac{161}{30}$$

$$5\frac{11}{30}$$

$$\mathbf{a} = \begin{pmatrix} 3 \\ -1 \end{pmatrix} \quad \mathbf{b} = \begin{pmatrix} 1 \\ -2 \end{pmatrix}$$

$$3\mathbf{a} = \begin{pmatrix} 9 \\ -3 \end{pmatrix} \quad 3\mathbf{b} = \begin{pmatrix} 3 \\ -6 \end{pmatrix}$$

Work out  $3\mathbf{a} + 3\mathbf{b}$ 

$$3\mathbf{a} + 3\mathbf{b} = \begin{pmatrix} 12 \\ -9 \end{pmatrix}$$

Find the perimeter of the isosceles triangle

$$31 - 3x = 2x + 1$$

$$5x = 30$$

$$x = 6$$

$$13 + 13 + 4 = 30\text{cm}$$

