

7th March

Higher 5-a-day



Corbettmaths

A car travels 200 miles to the nearest 10 miles.

$$195/205$$

It travels for 4 hours to the nearest hour.

$$3.5/4.5$$

Calculate the greatest possible average speed.

$$\text{Max speed} = \frac{\text{max distance}}{\text{min time}}$$

$$= 205/3.5$$

$$= 58.5714 \text{ mph}$$

ABCD is a parallelogram.

AB is  $(x + 3)$ cm

$$2x + 6$$

BC is twice the length of AB.

The perimeter of the parallelogram is 80cm.

Find the length of BC.

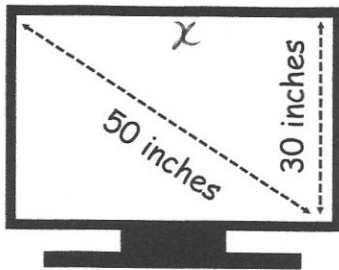
$$(x+3) + (x+3) + (2x+6) + (2x+6)$$

$$= 6x + 18 = 80$$

$$6x = 62$$

$$x = 10\frac{1}{3}$$

$$BC = 26\frac{2}{3} \text{ cm}$$



Find the area of the TV screen shown.

$$x^2 + 30^2 = 50^2$$

$$x^2 = 1600$$

$$x = 40$$

$$30 \times 40 = 1200 \text{ square inches}$$

Factorise  $6w^2 - 11w - 10$

$$(3w + 2)(2w - 5)$$

The length of a rectangle is increased by 20%.

The width of the rectangle is increased by 30%.

Work out the percentage increase in area.

$$1.2 \times 1.3$$

$$= 1.56$$

$$56\% \text{ increase}$$