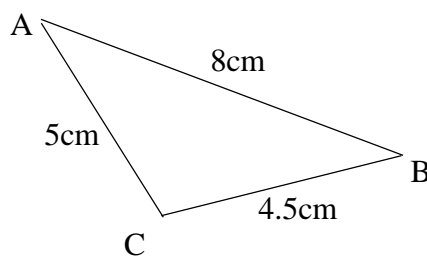


1. Find the equation of the line passing through the points (1, 3) and (-3, 5)
2. An antique painting is valued at £2750 in 2015. If it decreases in value by 1.9% per year, what will the expected value be in 2019? Give your answer correct to 2 significant figures.
3. Change the subject of the formula below to  $t$ .

$$P = \frac{7(t-2)}{4}$$

4. In a special offer, a box of cereal weighs 900g. This includes “20% free”. Work out the weight of the original box.
5. Two lines with equations  $3x + y = 4$  and  $ax + 2y = 8$  are parallel. Find the value of  $a$ .
6. Find  $|u|$ , the magnitude of the vector  $u = \begin{pmatrix} 2 \\ 5 \\ 4 \end{pmatrix}$ , leaving your answer as a surd in its simplest form.
7. Calculate the size of angle CAB in the triangle below.



8. A sector has radius 6cm and area  $84\text{cm}^2$ . Work out the angle at the centre of the sector.
9. Evaluate  $2\frac{1}{4} \times \frac{11}{6}$ .
10. In the cuboid diagram, D is the point (0,3,0) and F is (7,6,4). Write down the coordinates of C.

