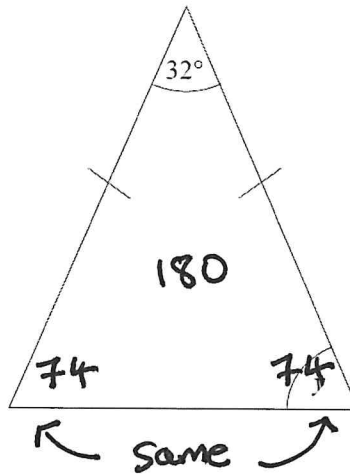


m3 =
36
days
to go!

(b) Work out the size of the angle y in the diagram below.



isosceles triangle

$180 - 32$
 148
shared between
2 angles

Answer 74° [2]

14 The waiting times for patients at a surgery are recorded in the table.

BIG LIST

Waiting time t (minutes)	Number of patients
2.5 $0 < t \leq 5$	7
7.5 $5 < t \leq 10$	8
12.5 $10 < t \leq 15$	5
17.5 $15 < t \leq 20$	5
22.5 $20 < t \leq 25$	4
27.5 $25 < t \leq 30$	1

Frequency

2.5 2.5 2.5 2.5 2.5 2.5 2.5
7.5 7.5 7.5 7.5 7.5 7.5 7.5
12.5 12.5 12.5 12.5 12.5
17.5 17.5 17.5 17.5 17.5
22.5 22.5 22.5 22.5
27.5

(a) Write down the modal class.

most popular

Answer $5 < t \leq 10$ [1]

(b) Calculate an estimate of the mean waiting time.

Mean = $\frac{\text{add up big list}}{\text{how many}} = \frac{345}{30} = 11.5$

This is only an ESTIMATE
because we don't know
the exact data.

Answer 11.5 minutes [4]

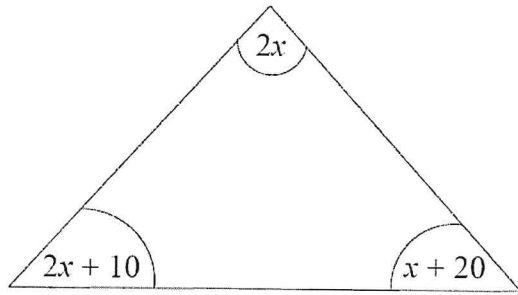


diagram not drawn accurately
 3 angles add up to 180°

Form and solve an equation to work out the size of the smallest angle in the triangle above.

Equation _____ [1]

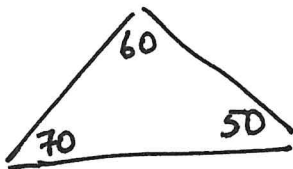
$$2x + 10 + 2x + x + 20 = 180$$

$$5x + 30 = 180$$

$$\begin{matrix} (-30) & (-30) \end{matrix}$$

$$\begin{matrix} 5x = 150 \\ (\div 5) & (\div 5) \end{matrix}$$

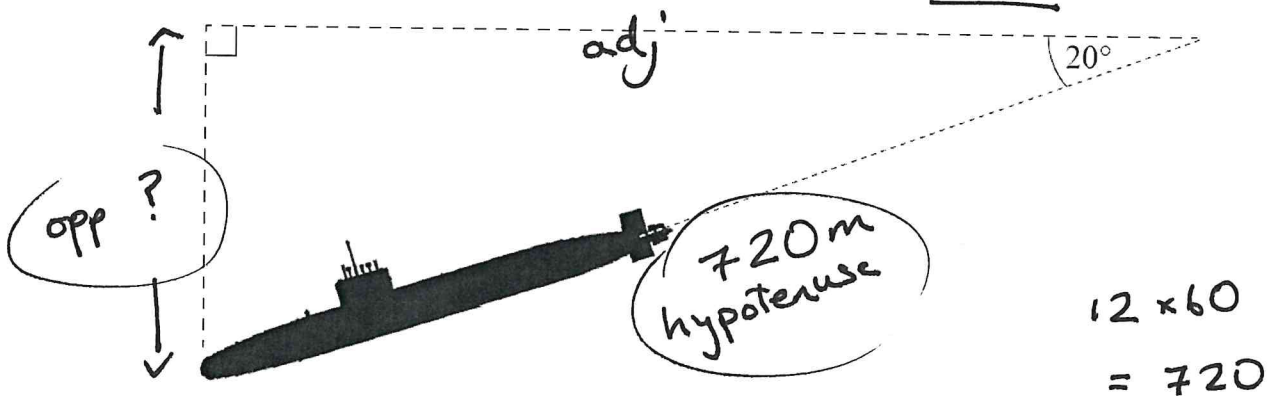
$$x = 30$$



Answer smallest angle = ~~30~~ 50° [3]

- 21 A submarine makes a diving angle of 20° below the horizontal as shown. It travels at a constant speed of 12m/s.

Work out how deep the front end of the submarine is after one minute. 60sec.



$$12 \times 60 = 720$$



$$\begin{matrix} A & O \\ C & H & T & A \\ & & ? & \\ \sin 20 & = & \frac{?}{720} \end{matrix}$$

$$? = 720 \times \sin 20$$

$$? = 246$$