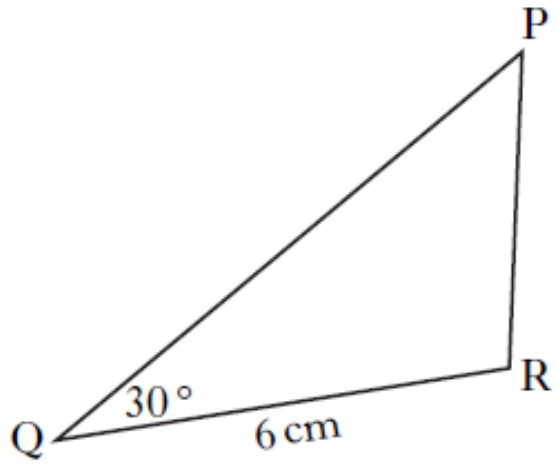
TRIGONOMETRY HW

1) In triangle PQR:

- QR = 6 centimetres
- angle PQR = 30 °
- area of triangle PQR = 15 square centimetres.

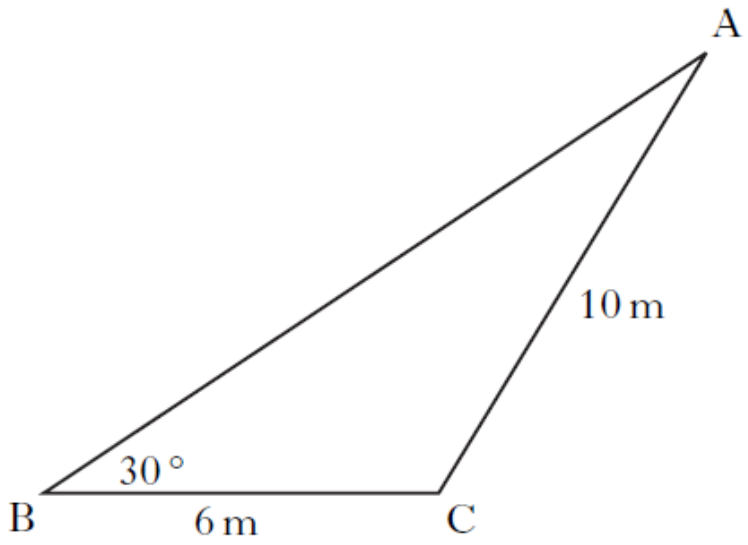


Calculate the length of PQ.

NON-CALCULATOR

2) In triangle ABC:

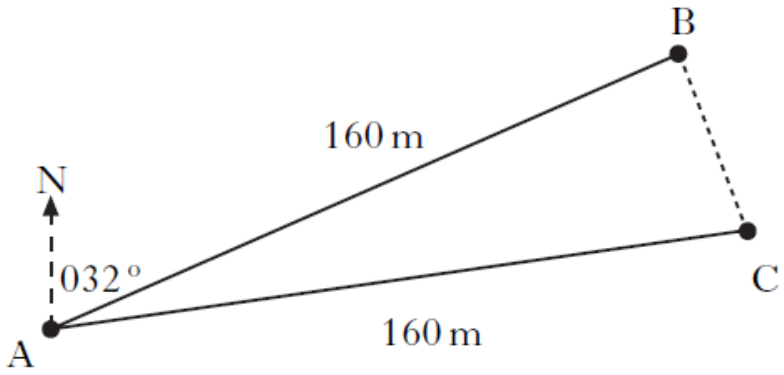
- BC = 6 metres
- AC = 10 metres
- angle ABC = 30 °.



Given that sin 30 ° = 0·5, show that sin A = 0·3.

3)

Jane is taking part in an orienteering competition.



She should have run 160 metres from A to B on a bearing of 032°.

However, she actually ran 160 metres from A to C on a bearing of 052°.

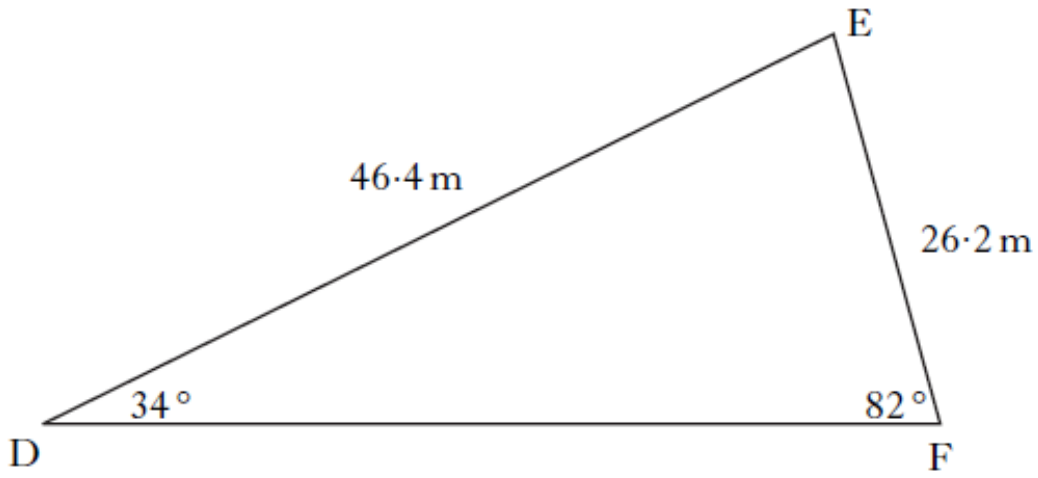
(*a*) Write down the size of angle BAC. **1**

(*b*) Calculate the length of BC. **3**

(*c*) What is the bearing from C to B? **2**

4)

As part of their training, footballers run around a triangular circuit DEF.



- ∠EDF = 34°
- ∠DFE = 82°
- DE = 46·4 metres
- EF = 26·2 metres

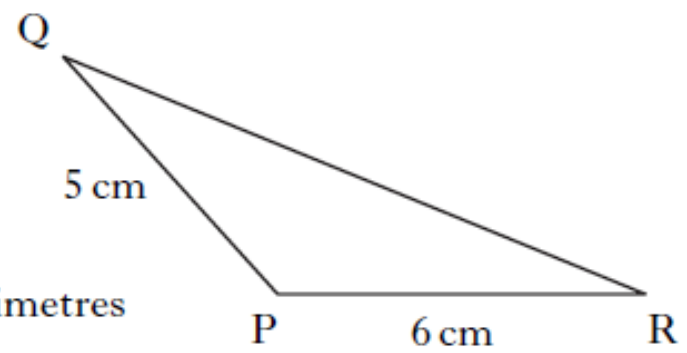
How many **complete** circuits must they run to cover **at least** 1000 metres?

KU	RE
	4

5)

In triangle PQR:

- PQ = 5 centimetres
- PR = 6 centimetres
- area of triangle PQR = 12 square centimetres
- angle QPR is **obtuse**.



Calculate the size of angle QPR.

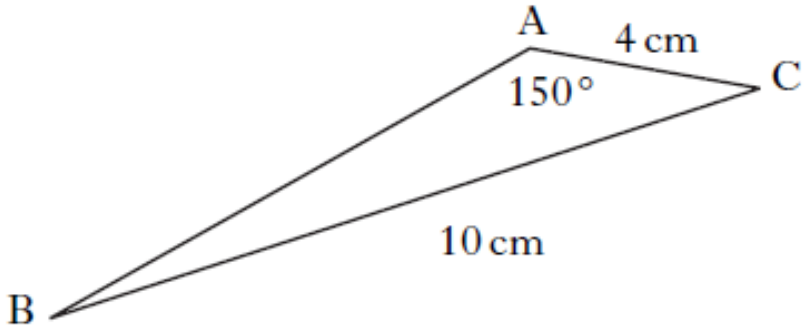
4

6) NON-CALCULATOR

KU	RE

In triangle ABC

- AC = 4 centimetres
- BC = 10 centimetres
- angle BAC = 150°

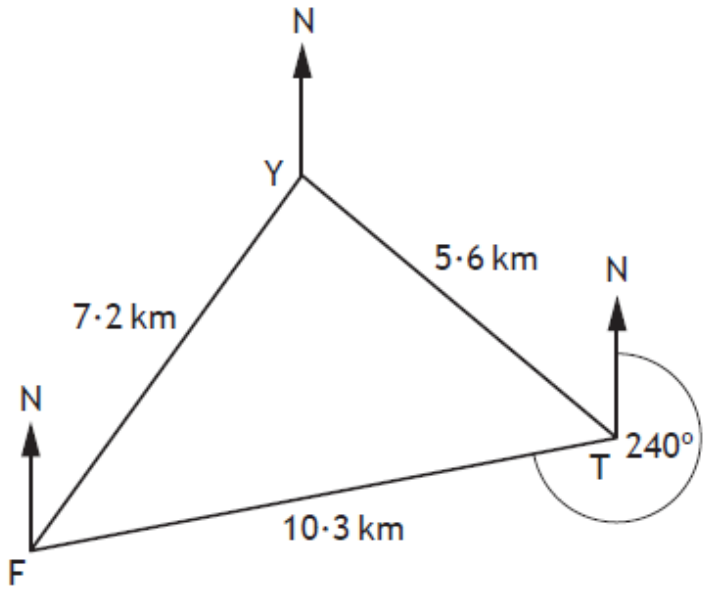


Given that $\sin 30° = \frac{1}{2}$, show that $\sin B = \frac{1}{5}$.

4

7) A ferry and a trawler receive a request for help from a stranded yacht.

On the diagram the points F, T and Y show the positions of the ferry, the trawler and the yacht respectively.



- FY is 7·2 kilometres.
- TY is 5·6 kilometres.
- FT is 10·3 kilometres.
- F is on a bearing of 240° from T.

Calculate the bearing of the yacht from the trawler. 4