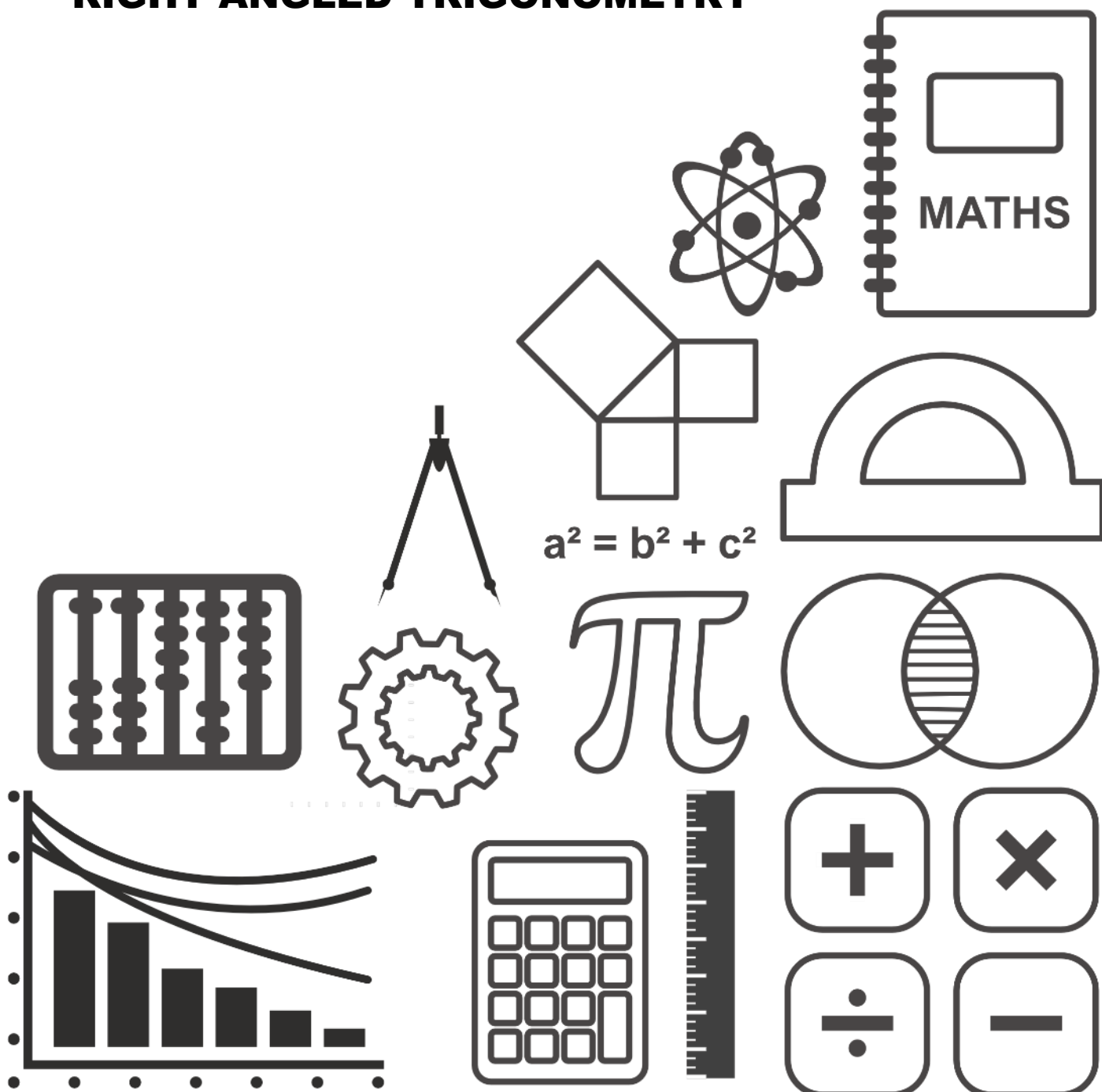


MATHSDIY

GCSE TOPIC BOOKLET RIGHT ANGLED TRIGONOMETRY



1. (a) The triangle EFG is a right-angled triangle with $\widehat{EFG} = 90^\circ$. The length $EG = 14.8$ cm and $\widehat{GEF} = 39^\circ$.

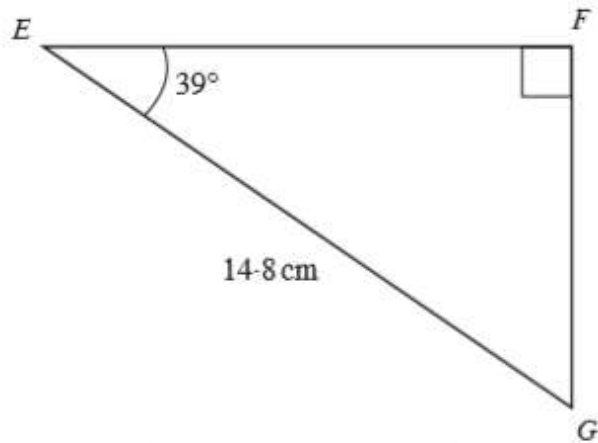


Diagram not drawn to scale.

Calculate the length of EF .

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[3]

- (b) The triangle RST is a right-angled triangle with $\widehat{TRS} = 90^\circ$. The length $RT = 12.8$ cm and the length $RS = 18.5$ cm.

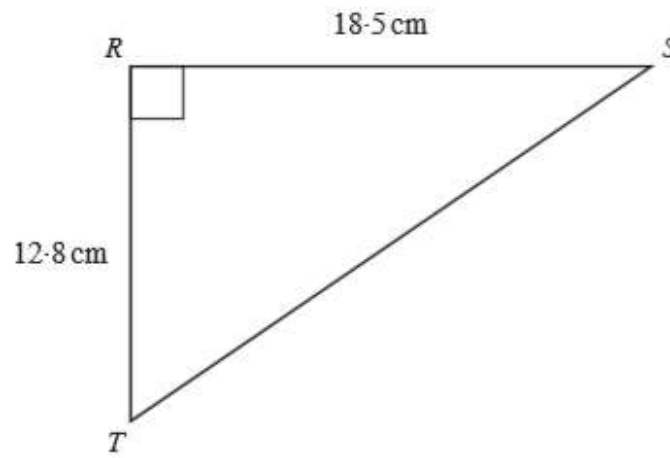


Diagram not drawn to scale.

Calculate the size of the angle \widehat{RST} .

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[3]

2. (a)

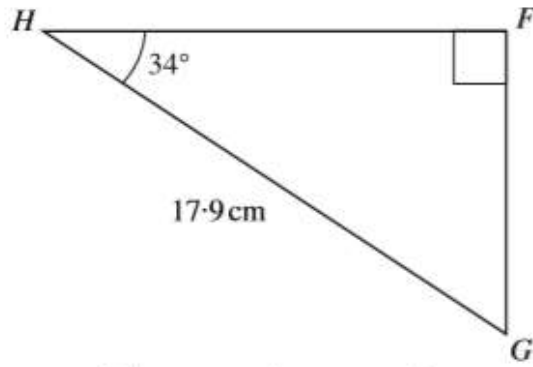


Diagram not drawn to scale.

Calculate the length of FG .

[3]

(b)

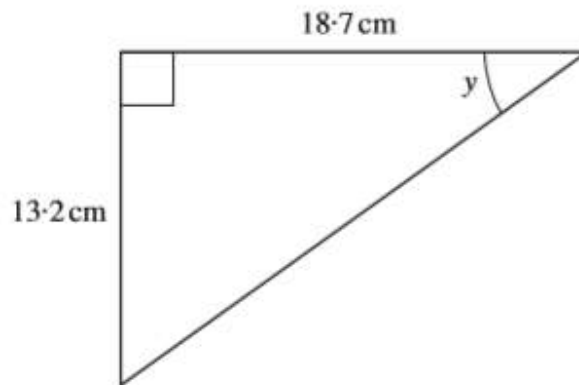


Diagram not drawn to scale.

Calculate the size of the angle y .

[3]

3.

(a) The triangle ABC is such that $\hat{CAB} = 90^\circ$, $CB = 32 \text{ mm}$ and $\hat{ACB} = 52^\circ$.

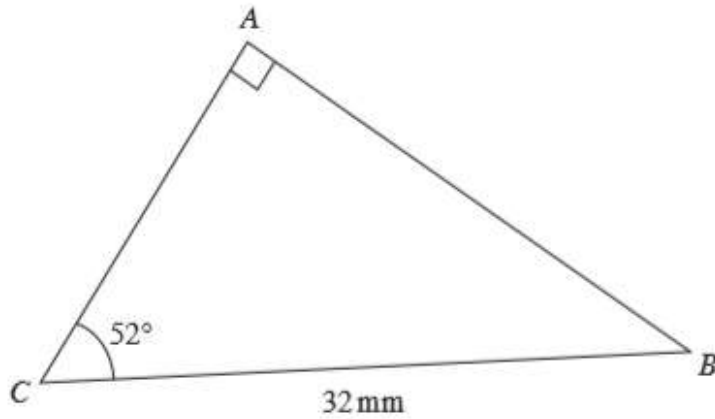


Diagram not drawn to scale.

Calculate the length of AB .

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[3]

(b) The triangle STU is such that $\widehat{TUS} = 90^\circ$, $SU = 32.5$ cm and $ST = 43.8$ cm.

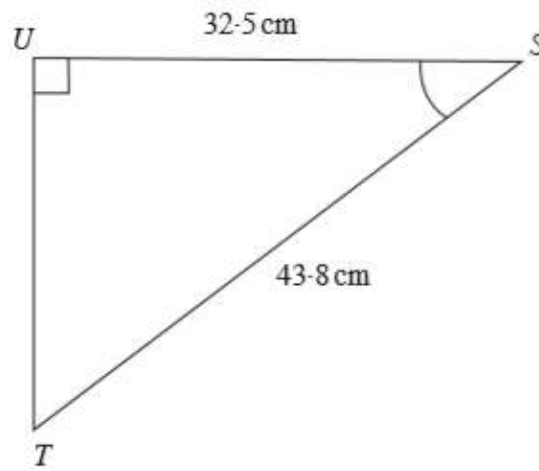


Diagram not drawn to scale.

Calculate the size of \widehat{UST} .

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[3]

4.

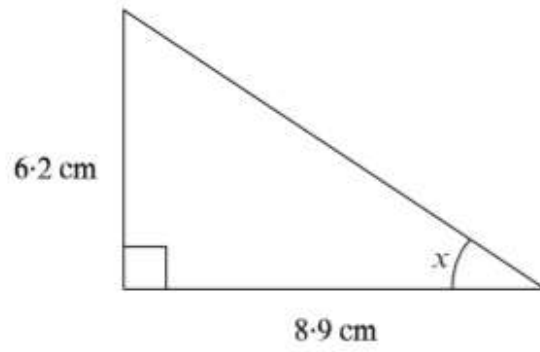


Diagram not drawn to scale.

Find the size of the angle marked x .

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[3]

5. (a) A vertical post AB is 15 m from a point C on horizontal ground. The angle of elevation of the top of the post from the point C is 67° . Calculate the height of the post.

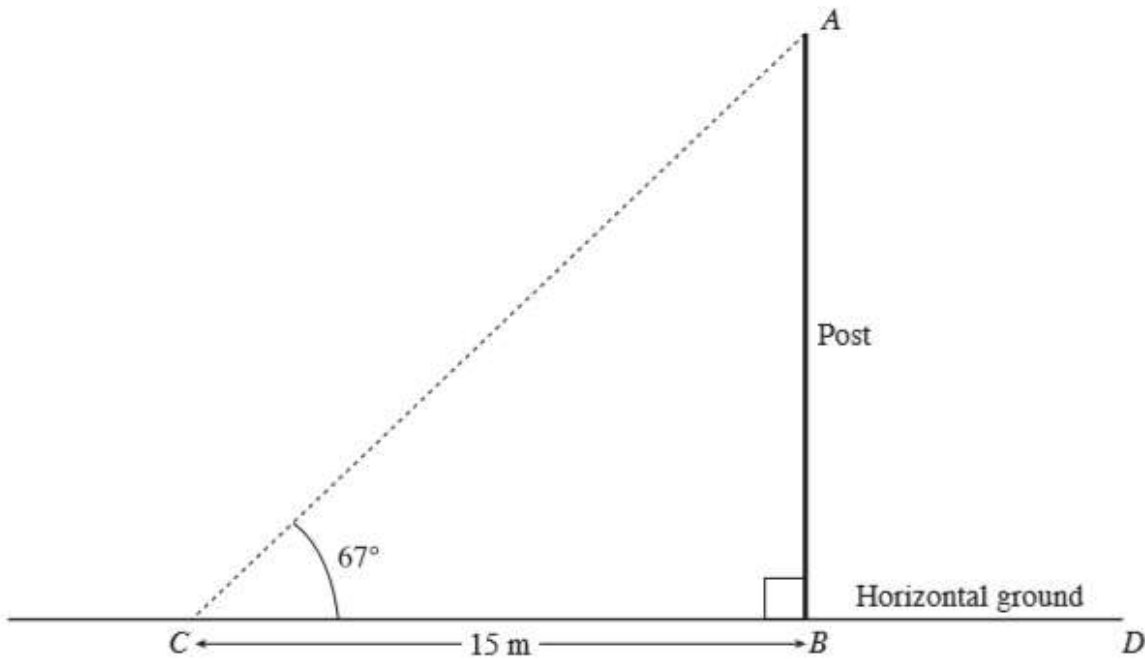


Diagram not drawn to scale.

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- (b) A ladder, 21 m long, is placed against a vertical wall. The foot of the ladder is 13 m from the wall on horizontal ground. Calculate the angle which the ladder makes with the horizontal.

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[3]

6. In the diagram below, the triangle ABE is right-angled at E and the triangle ADC is right-angled at D .

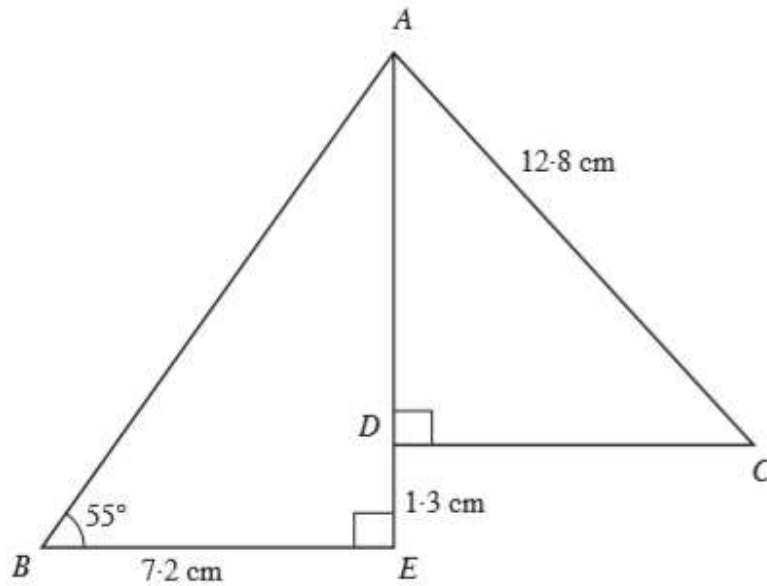


Diagram not drawn to scale.

Given that $BE = 7.2$ cm, $DE = 1.3$ cm, $AC = 12.8$ cm and $\widehat{ABE} = 55^\circ$,

- (a) find the length of AE ,

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- (b) calculate the size of \widehat{ACD} .

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[3]

