# Tiigonometry (Q 5, Paper 2)

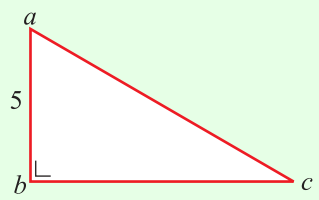
## Lesson No. 1: Right-angled Triangles

**2007**

5 (b) In the right-angled triangle $abc$, $|ab| = 5$ cm.
The area of the triangle is 15 cm$^2$.
(i) Find $|bc|$.

(ii) Find $|\angle cab|$, correct to the nearest degree.

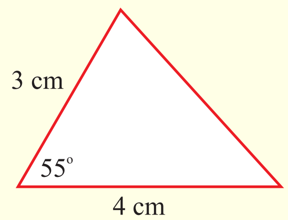
(iii) Find $|\angle bca|$, correct to the nearest degree.




**2006**

5 (a) The lengths of two sides of a right-angled triangle are shown in the diagram.
(i) Copy the diagram into your answer book and on it mark the angle $A$ such that $\tan A = \frac{5}{8}$.

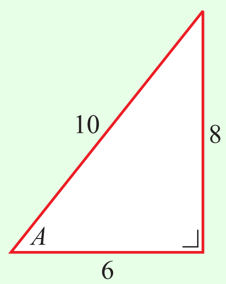
(ii) Find the area of the triangle.




**2004**

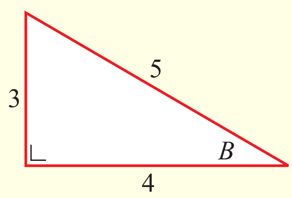
5 (a) The lengths of the sides of a right-angled triangle are shown in the diagram and $A$ is the angle indicated.
(i) Write down the value of cos $A$.

(ii) Hence, find the angle $A$, correct to the nearest degree.




**2003**

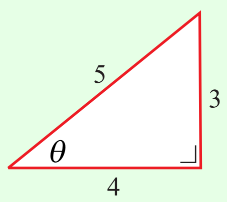
5 (a) The lengths of the sides of a right-angled triangle are shown in the diagram and $B$ is the angle indicated.
Find the value of sin $B$cos $B$, as a fraction.




**2002**

5 (a) Use the information given in the diagram to show that

$$\sin\theta + \cos\theta > \tan\theta.$$

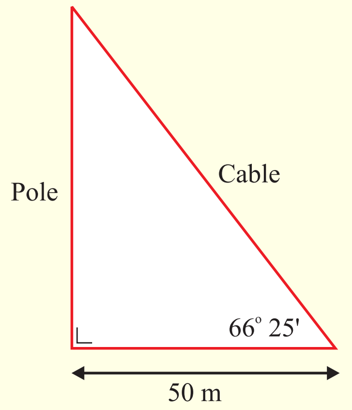


**2000**

5 (b) The diagram shows a vertical pole which stands on level ground.
A cable joins the top of the pole to a point on the ground which is 50 m from the base of the pole.
The cable makes an angle of $66^\circ\ 25'$ with the ground.

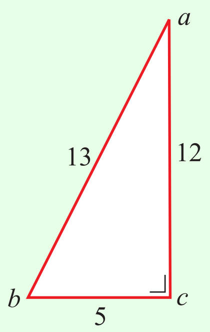
(i) Find the height of the pole, correct to the nearest metre.

(ii) Find the length of the cable, correct to the nearest metre.




**1999**

5 (a) $abc$ is a right-angled triangle with $|\angle acb| = 90^\circ$, $|ab| = 13$, $|bc| = 5$ and $|ac| = 12$.
Find, as fractions, the value of $\sin \angle abc$ and the value of $\tan \angle bac$.




**1998**

5 (b) $A$ is an acute angle such that $\tan A = \frac{21}{20}$.

(i) Find, as fractions, the value of $\cos A$ and the value of $\sin A$.

(ii) Find the measurement of angle $A$, correct to the nearest degree.

**Answers**

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|---|---|---|---|---|
| **2007** | 5 | (b) (i) $\lvert bc\rvert = 6$ cm | (ii) $50^\circ$ | (iii) $40^\circ$ |
| **2006** | 5 | (a) (ii) 20 units$^2$ | | |
| **2004** | 5 | (a) (i) $\frac{3}{5}$ | (ii) $53^\circ$ | |
| **2003** | 5 | (a) $\frac{12}{25}$ | | |
| **2000** | 5 | (b) (i) 115 m | (ii) 125 m | |
| **1999** | 5 | (a) $\frac{12}{13}$, $\frac{5}{12}$ | | |
| **1998** | 5 | (b) (i) $\frac{20}{29}$, $\frac{21}{29}$ | (ii) $46^\circ$ | |