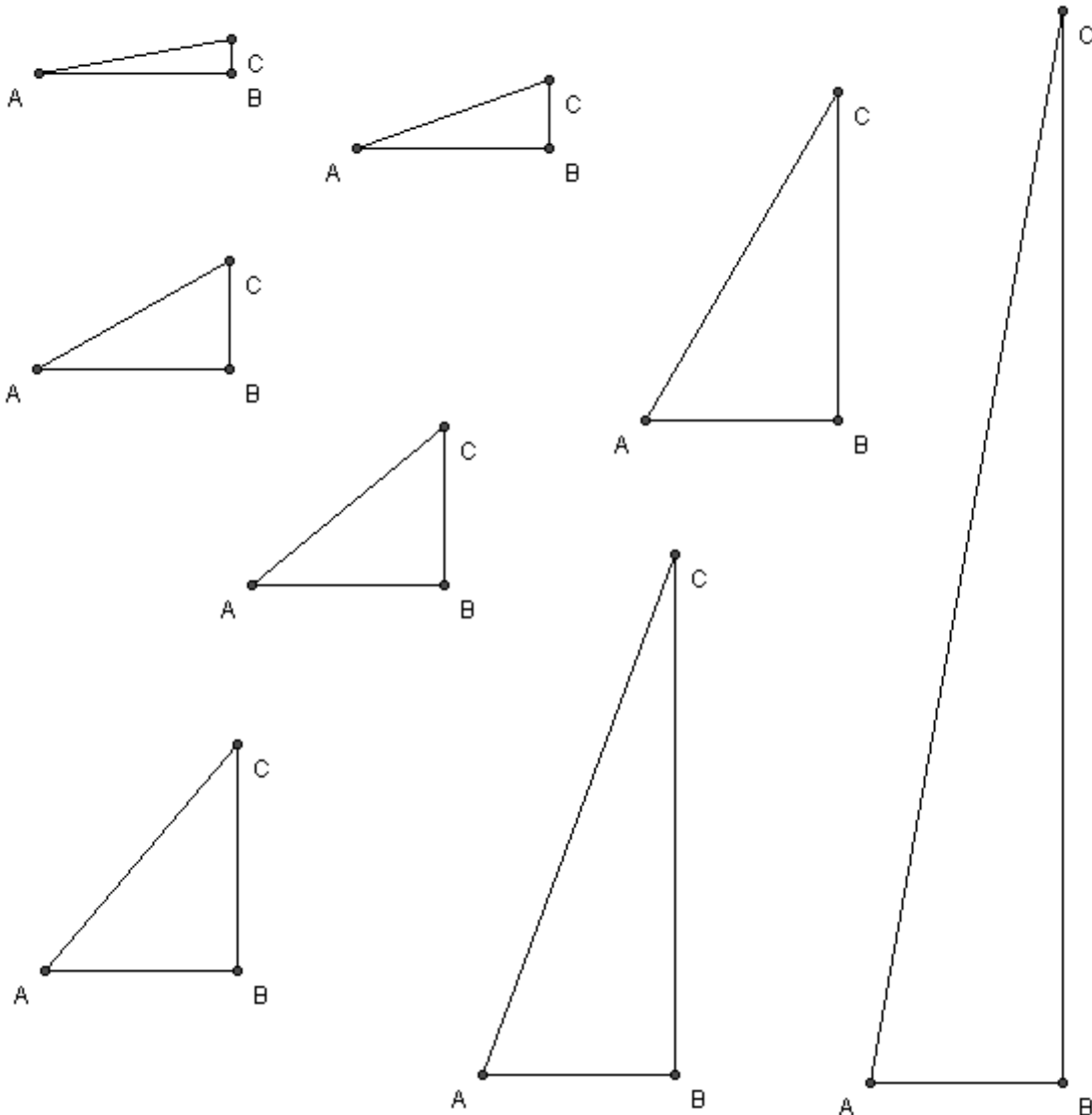


Unit 6:1a Right-Angled Trigonometry – Tangent Ratio

- 1 a) Complete the table by measuring the angle \hat{A} and the lengths AB and BC in each of the right-angled triangles below. For each angle, calculate the tangent ratio by dividing BC by AB. Round these answers to 1 decimal place.

Angle A°	10	20	30	40	50	60	70	80
AB (mm)								
BC (mm)								
$\tan A^\circ = \frac{BC}{AB}$								



Unit 6:1a Right-Angled Trigonometry – Tangent Ratio

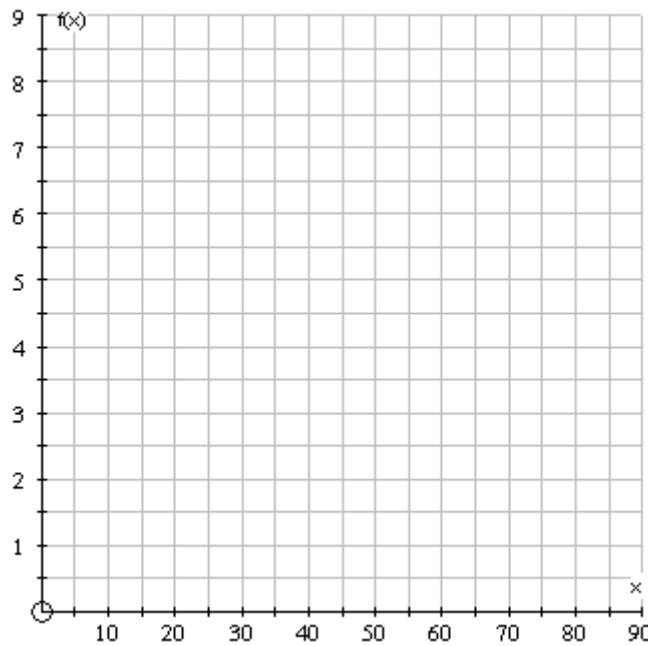
b) What is the value of the tangent ratio for 45° ? Check by drawing a diagram.

Answer:

c) What is the value of the tangent ratio for 90° ? Try to explain why.

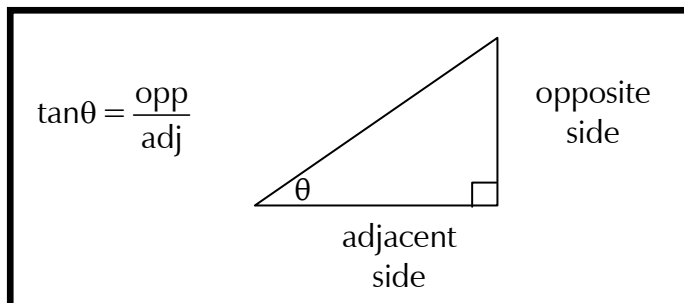
Answer:

d) Using your values in the table, draw a graph of the tangent function for the domain $0^\circ \leq x^\circ \leq 90^\circ$



e) Check the shape of the tangent function on your GDC.

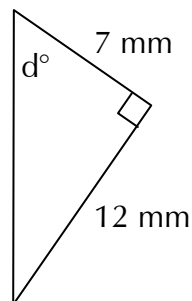
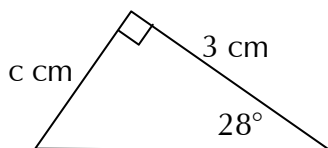
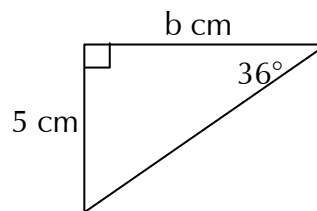
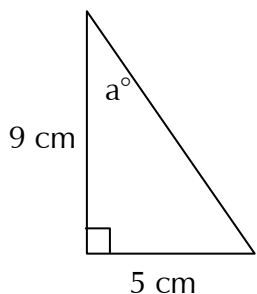
Unit 6:1b Right-Angled Trigonometry – Tangent Ratio



For all the questions in this exercise;

- If answers are not exact then round any lengths to 3 significant figures, and any angles to 1 decimal place
- The diagrams are not drawn to scale.

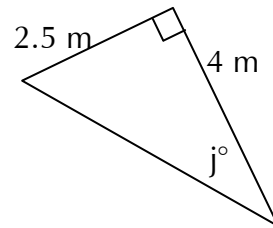
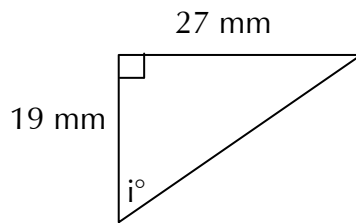
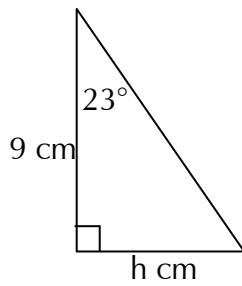
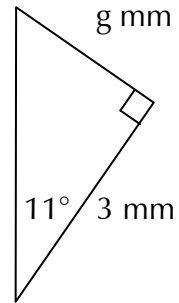
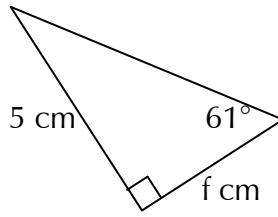
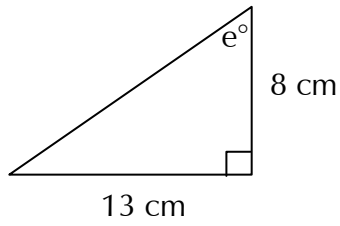
1. Calculate the sides and angles indicated.



Answers:

Unit 6:1b Right-Angled Trigonometry – Tangent Ratio

2.



Answers: