RIGHT-ANGLED TRIGONOMETRY

I have explored the relationships that exist between the sides, or sides and angles, in right-angled triangles and can select and use an appropriate strategy to solve related problems, interpreting my answer for the context.

Pupils should be able to:

- Name the sides of a right-angled triangle
- Use scale drawings to obtain ratios of sides, eg $\frac{\text{opp}}{\text{adj}}$ for selected angles, to 1 decimal place
- Use ratios found to calculate missing sides and angles in right angled-triangles

PUPILS SHOULD COMPLETE THE FOLLOWING EXERCISE AND ASSESS THEIR PROGRESS BY TICKING ONE OF THE OPTIONS FOR EACH TOPIC IN THE TABLE BELOW

	DEVELOPING	CONSOLIDATING	SECURE
Name sides (QUESTION 1)			
Find ratios of sides (QUESTION 2)			
Use ratios to find missing sides (QUESTION 3)			
Use ratios to find missing angles (QUESTION 4)			

mymaths lessons: library/shape/trigonometry/ trig missing angles
                             library/shape/trigonometry /trig missing sides

Write your answers in the spaces beside each question.

1. Label the sides of these triangles, for the angles marked, with **opposite, adjacent and hypotenuse**
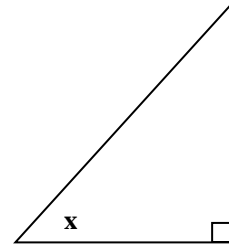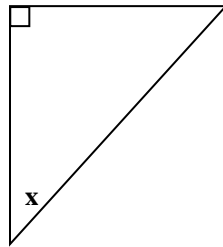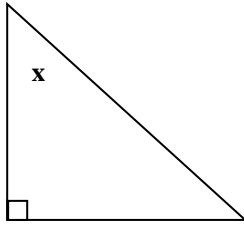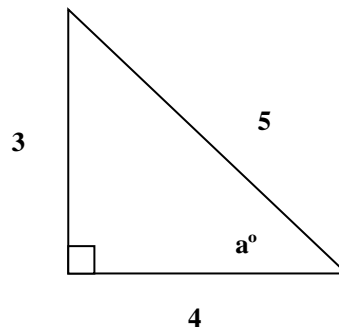
2. For the triangle given below, using angle a, calculate the following ratios
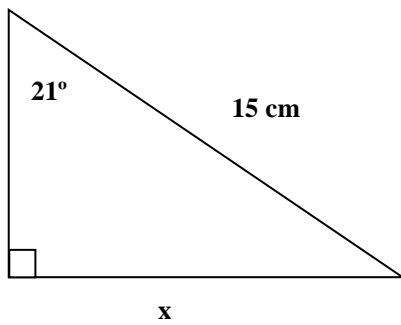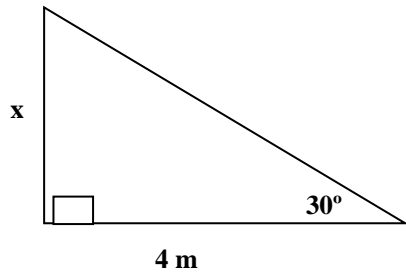
<u>opposite side</u> =
adjacent side

<u>opposite side</u> =
hypotenuse

<u>adjacent side</u> =
hypotenuse side

3. Calculate to 1 decimal place, the value of x in each of these right-angled triangles

x

30°

4 m

21°

15 cm

x

4. Calculate the approximate size of the angle z in each of these right-angled triangles

9

z

11

z

14 m

3