AREA & VOLUME

MNU 4-11a
I can apply my knowledge and understanding of measure to everyday problems and tasks and appreciate the practical importance of accuracy when making calculations.
MTH 4-11b
Through investigating real-life problems involving the surface area of simple 3D shapes, I can explore ways to make the most efficient use of materials and carry out the necessary calculations to solve related problems.
MTH 4-11c
I have explored with others the practicalities of the use of 3D objects in everyday life and can solve problems involving the volume of a prism, using a formula to make related calculations when required.

Pupils should be able to:

- Know standard units of area (mm^2, cm^2, m^2, hectare) and volume (mm^3, cm^3, litre, m^3)
- Know the relationships involved e.g. 1 ha = 10 000 m^2 1 L = 1000 cm^3
- Know that the area of a rectangle is $A = lb$
- Calculate the area of a compound rectangular shape
- Know that the area of any triangle is $A = \frac{1}{2}bh$
- Find the surface area of a cuboid
- Calculate the volume of a prism with compound rectangular ends
- Know the standard units of weight (g, kg, tonne) and the relationships involved

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

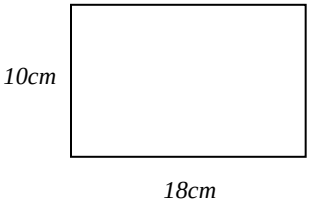
	DEVELOPING	CONSOLIDATING	SECURE
Area of rectangle and triangle (QUESTION 1			
Area of compound shape (QUESTION 2)			
Surface area of cuboid (QUESTION 3			
Surface area of compound prism (QUESTION 4)			

mymaths lessons: library/shape/volume & surface area/nets, surface areas
mymaths: library/shape/volume & surface areas/volume of cuboids & volume of prisms

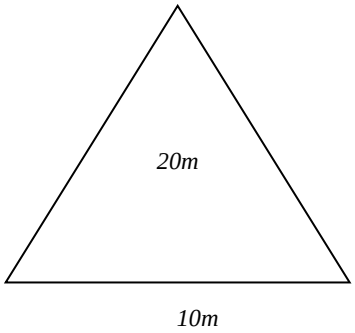
SELF EVALUATION EXERCISE DATE DUE_____

1. Calculate the areas of the objects below, using an appropriate formula:

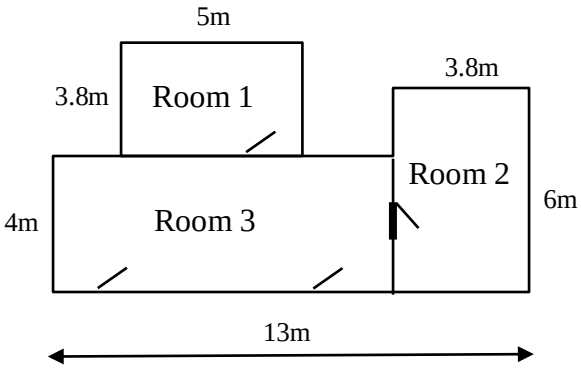
a)



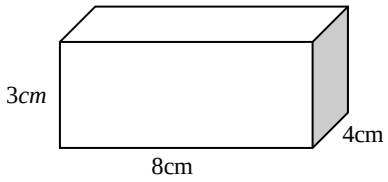
b)



2. How many square metres of carpet are need to cover the floors of this house?



3. Find the surface area of this box.



4. Find the surface area and volume of the shape below: