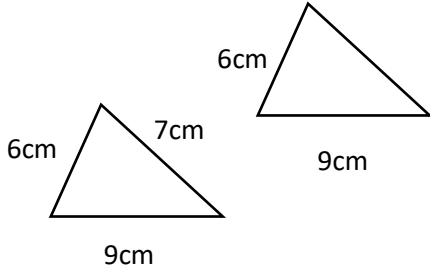


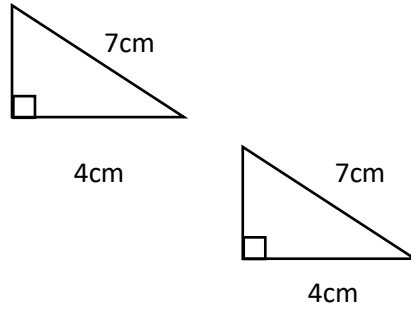
## Congruence and Similarity Revision

1) Give the reason that the following pairs of triangles are congruent to each other:

a)

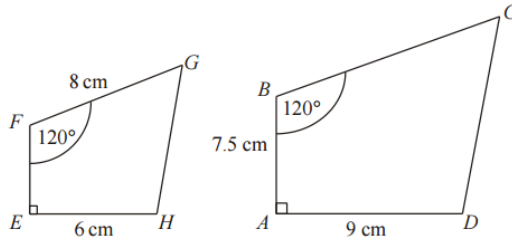


b)



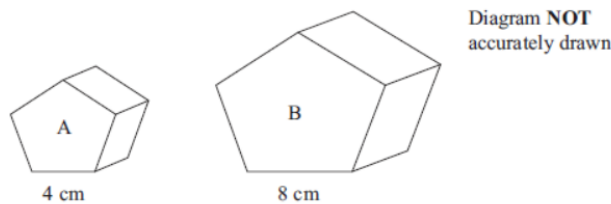
2) ABCD is a rectangle and the two points P and Q are midpoints of AB and CD respectively. Prove that triangles APD and AQP are congruent to each other

3) These two shapes are mathematically similar, find the length of BC and EF



4) A 20 Euro note is a rectangle 133 mm long and 72 mm wide.  
A 500 Euro Note is a rectangle 165 mm long and 82 mm wide.  
Show that the two rectangles are not mathematically similar.

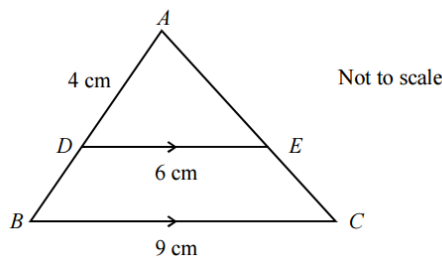
5) These two solids are mathematically similar



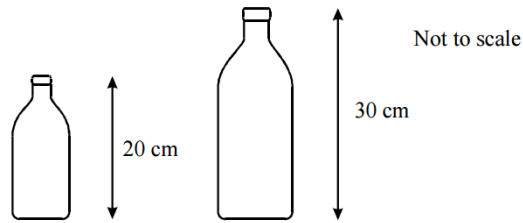
The volume of A is  $80\text{cm}^3$ . Find the volume of B.

Solid B has a total surface area of  $160\text{cm}^2$ . Find the total surface area of A.

6) Prove that triangles ABC and ADE are similar. Find the length of BD.

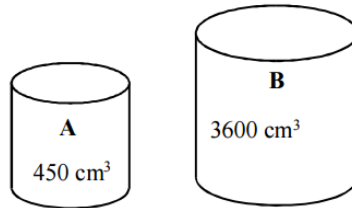


7) Bottles of milk are priced per ml. Two similar bottles of milk are shown below:



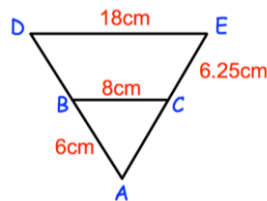
If the smaller bottle costs 40p. Find the price of the larger bottle.

8) 2 similar cylinders are given below

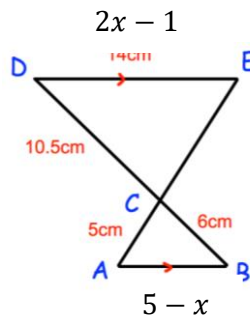


If B has a surface area of  $250\text{cm}^2$ . Find the surface area of A

9) Find the length of AC



10) Find  $x$



### Answers

- 1a) SSS b) RHS 2) AD is shared side. angles PAD and QDA are both 90. AP = DQ as both P and Q are midpoints of equal length sides. APD and AQD congruent by SAS. 3) BC=12 EF=5  
 4)  $133/72=1.847$  and  $165/82=2.012$  not the same SF so not similar. 5)  $640\text{cm}^3$  and  $40\text{cm}^2$   
 6) 2cm 7) £1.35 8) 62.5 9) 5cm 10)  $\frac{31}{15}$