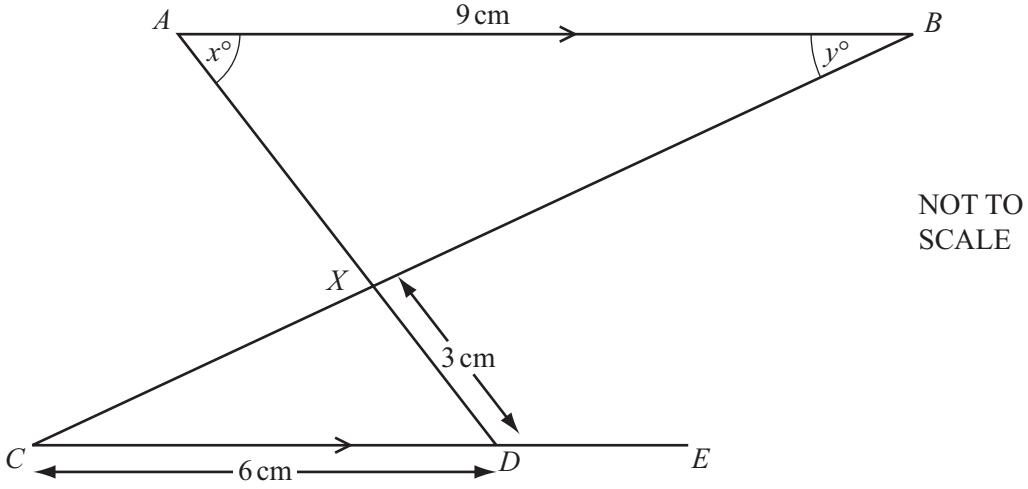
1)

(a)



The lines *AB* and *CDE* are parallel.
AD and *CB* intersect at *X*.
AB = 9 cm, *CD* = 6 cm and *DX* = 3 cm.

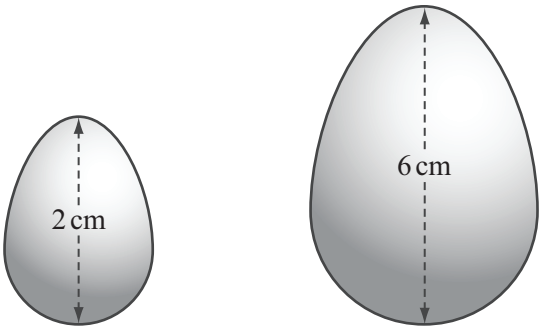
(i) Complete the following statement.

Triangle *ABX* is to triangle *DCX*. [1]

(ii) Calculate the length of *AX*.

Answer(a)(ii) *AX* = cm [2]

2)

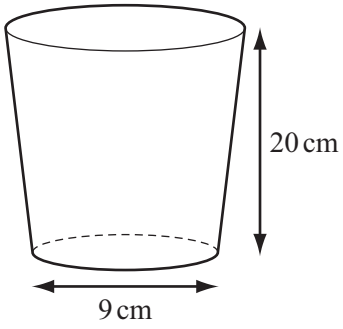


A company makes solid chocolate eggs and their shapes are mathematically similar.
The diagram shows eggs of height 2 cm and 6 cm.
The mass of the small egg is 4 g.

Calculate the mass of the large egg.

Answer g [2]

3)



NOT TO SCALE

The diagrams show two mathematically similar containers.
The larger container has a base with diameter 9 cm and a height 20 cm.
The smaller container has a base with diameter d cm and a height 10 cm.

(a) Find the value of d.

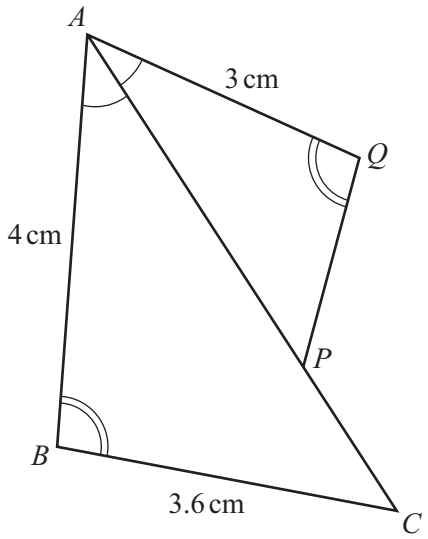
Answer(a) d = [1]

(b) The larger container has a capacity of 1600 ml.

Calculate the capacity of the smaller container.

Answer(b) ml [2]

4)



NOT TO SCALE

The diagram shows two triangles ACB and APQ.

Angle PAQ = angle BAC and angle AQP = angle ABC.

AB = 4 cm, BC = 3.6 cm and AQ = 3 cm.

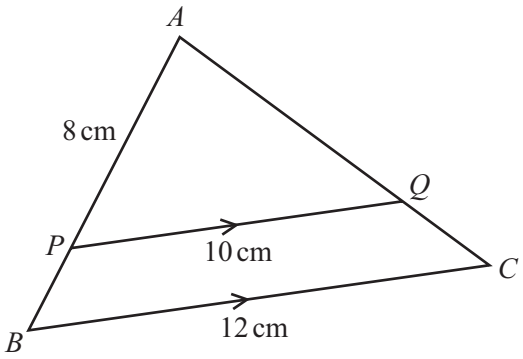
(i) Complete the following statement.

Triangle ACB is to triangle APQ. [1]

(ii) Calculate the length of PQ.

Answer(a)(ii) PQ = cm [2]

5)



NOT TO SCALE

APB and *AQC* are straight lines. *PQ* is parallel to *BC*.
AP = 8 cm, *PQ* = 10 cm and *BC* = 12 cm.
Calculate the length of *AB*.

Answer AB = cm [2]

6)