IGCSE – Volume - 3

35 m

1.1 m

NOT TO
SCALE

24 m
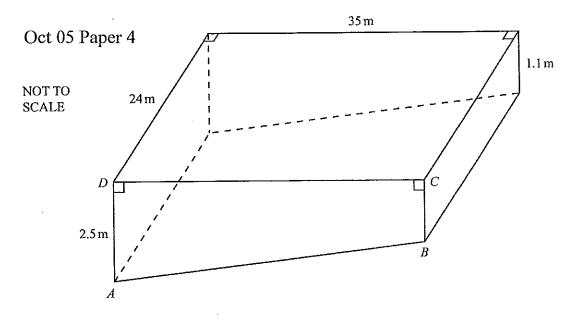
D

C

2.5 m

B

A

The diagram shows a swimming pool of length 35 m and width 24 m.
A cross-section of the pool, *ABCD*, is a trapezium with *AD* = 2.5 m and *BC* = 1.1 m.

(a) Calculate

    (i) the area of the trapezium *ABCD*,   [2]

    (ii) the volume of the pool,   [2]

    (iii) the number of litres of water in the pool, when it is full.   [1]

(b) *AB* = 35.03 m correct to 2 decimal places.
    The sloping rectangular floor of the pool is painted.
    It costs $2.25 to paint one square metre.

    (i) Calculate the cost of painting the floor of the pool.   [2]

    (ii) Write your answer to **part (b)(i)** correct to the nearest hundred dollars.   [1]

(c) **(i)** Calculate the volume of a cylinder, radius 12.5 cm and height 14 cm.   [2]

    (ii) When the pool is emptied, the water flows through a cylindrical pipe of radius 12.5 cm.
    The water flows along this pipe at a rate of 14 centimetres per second.
    Calculate the time taken to empty the pool.
    Give your answer in days and hours, correct to the nearest hour.   [4]