

LESSON 1

Lesson 107 Calculating areas of triangles

- 1 a 27 cm^2 b 72 cm^2 c 32 cm^2 d 35 cm^2
 2 a 10 cm^2 b 5 cm^2 c 7.5 cm^2 d 2.5 cm^2
 3 a 13 cm^2 b 10 cm^2 c 12.5 cm^2

LESSON 2

Lesson 106 Calculating areas and perimeters

- 1 a 152 cm^2 , 56 cm b 144 cm^2 , 70 cm
 c 450 cm^2 , 104 cm
 2 a 62 m^2 b 149 m^2
 3 a 900 cm^2 b 800 cm^2 c 1050 cm^2
 4 9180 cm^2 4860 cm^2
 13 stripes in 78 cm ; each stripe is
 $(78 \div 13) \text{ cm high} = 6 \text{ cm}$
 3 of the red stripes are 150 cm long;
 4 of the red stripes are $(150 - 60) \text{ cm}$ long
 So area of red stripes
 $= (3 \times 150 \times 6) + (4 \times 90 \times 6)$
 $= 2700 + 2160 = 4860 \text{ cm}^2$

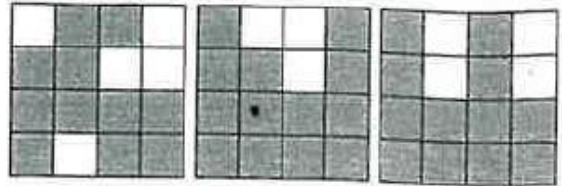
LESSON 3

Lesson 108 Investigating area and perimeter

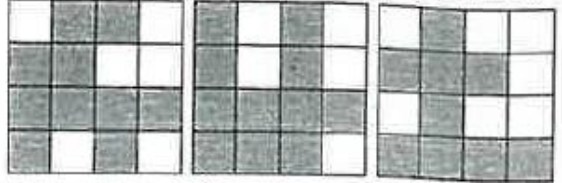
- 1 125 cm^2
 2 a 84 m^2 b 5 m
 3 a 120 cm^2 b 80 cm
 4 a 333.6 cm^2 b 131.4 cm

Puzzle time

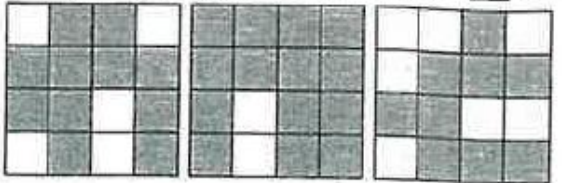
a and b



Area = 11 cm^2 Area = 13 cm^2 Area = 12 cm^2



Area = 10 cm^2 Area = 11 cm^2 Area = 9 cm^2



Area = 11 cm^2 Area = 14 cm^2 Area = 9 cm^2

- c No. The maximum perimeter of a shape comprising nine 1 cm^2 squares is 20 cm (squares arranged in a line). Therefore it is not possible to make a shape with a smaller area that has a perimeter of 20 cm .

LESSON 4

E2, L13 Pond borders



c, d

Length of side of pond (m)	1	2	3	4	5
Number of slabs	8	12	16	20	24



1 b

Length of side of pond (m)	1	2	3	4	5
Number of slabs	8	12	16	20	24

- c $S = 4P + 4$ or $4(P + 1)$
 d 36 slabs
 e $36 \times £7.95 = £268.20$
 2 a, b $18 \times £7.95 = £143.10$
 3 a, b $18 \times £8.49 = £152.82$



- 1 $4 \times 18 = 72$ slabs
 $16 \times 18 = 288$ slabs