

- 13a. The perimeter of the corner decoration is made up of one quarter-circle arc and two semicircle arcs.

Length of quarter-circle arc

$$= \frac{1}{4} \times 3.14 \times 60 \times 2$$

$$= 94.2 \text{ cm}$$

Length of two semicircle arcs

= circumference of one full circle

$$= 3.14 \times 60$$

$$= 188.4 \text{ cm}$$

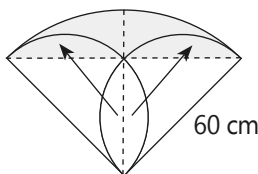
Perimeter of corner decoration

$$= 94.2 + 188.4$$

$$= 282.6 \text{ cm}$$

Ans: 282.6 cm

- 13b. The shaded parts have the same areas as a quarter circle of radius 60 cm with a triangle cut out from it.



Area of quarter circle

$$= \frac{1}{4} \times 3.14 \times 60 \times 60$$

$$= 2826 \text{ cm}^2$$

Area of triangle

$$= \frac{1}{2} \times 60 \times 60$$

$$= 1800 \text{ cm}^2$$

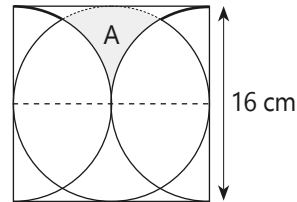
Area of shaded parts

$$= 2826 - 1800$$

$$= 1026 \text{ cm}^2$$

Ans: 1026 cm²

- 14a. The perimeter of the shaded part A can be visualised as 2 quarter-circle arcs.



Perimeter of 2 quarter-circle arcs

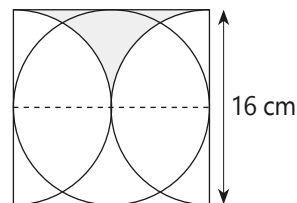
= Perimeter of one semicircle arc

$$= 3.14 \times 16 \div 2$$

$$= 25.12 \text{ cm}$$

Ans: 25.12 cm

- 14b. The shaded parts have the same area as 2 quarter circles of radius 8 cm cut out from half of the square of side 16 cm.



Radius of quarter circle

$$= 16 \div 2$$

$$= 8 \text{ cm}$$

Area of half of the square

$$= 16 \times 16 \div 2$$

$$= 128 \text{ cm}^2$$

Area of 2 quarter circles

= Area of one semicircle

$$= 3.14 \times 8 \times 8 \div 2$$

$$= 100.48 \text{ cm}^2$$

Total shaded area

$$= 128 - 100.48$$

$$= 27.52 \text{ cm}^2$$

Ans: 27.52 cm²