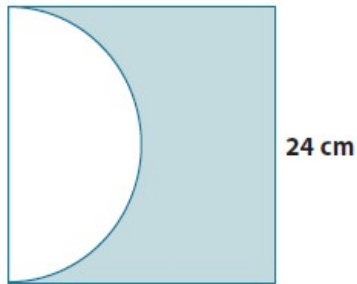
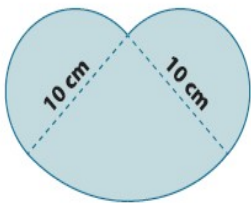


Composite Area Problems Worksheets

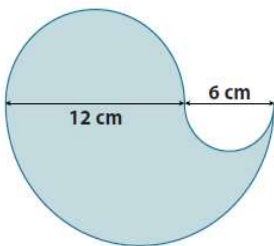
1. The figure shows a semicircle and a square. Find the area of the shaded region. Use 3.14 for π .



2. The figure shows two semicircles and a quarter of a circle. Find the area of the shaded region. Use 3.14 for π .

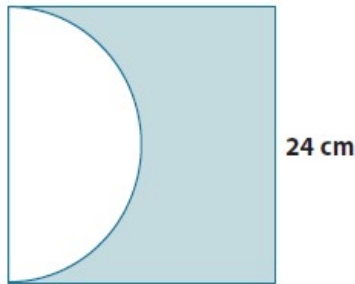


3. Jillian is making a paper flower motif for an art project. The flower she is making has four petals; each petal is formed by three semicircles as shown below. What is the area of the paper flower? Provide your answer in terms of π .



Composite Area Problems Worksheets

1. The figure shows a semicircle and a square. Find the area of the shaded region. Use 3.14 for π .



Area of the square – area of the semicircle

$$(24 \text{ cm} \times 24 \text{ cm}) - \left(\frac{1}{2}\right) (\pi \times (12 \text{ cm})^2)$$

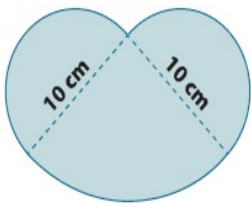
$$576 \text{ cm}^2 - \left(\frac{1}{2}\right) (3.14 \times 144 \text{ cm}^2)$$

$$576 \text{ cm}^2 - 226.08 \text{ cm}^2$$

$$349.92 \text{ cm}^2$$

The area is approximately 349.92 cm².

2. The figure shows two semicircles and a quarter of a circle. Find the area of the shaded region. Use 3.14 for π .



Area of two semicircles + area of quarter of the larger circle.

$$2 \left(\frac{1}{2}\right) (\pi \times (5 \text{ cm})^2) + \left(\frac{1}{4}\right) (\pi \times (10 \text{ cm})^2)$$

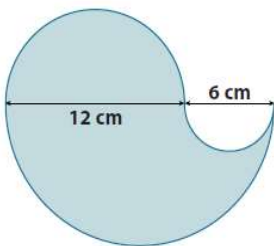
$$(3.14)(25 \text{ cm}^2) + (3.14)(25 \text{ cm}^2)$$

$$78.5 \text{ cm}^2 + 78.5 \text{ cm}^2$$

$$157 \text{ cm}^2$$

The area is approximately 157 cm².

3. Jillian is making a paper flower motif for an art project. The flower she is making has four petals; each petal is formed by three semicircles as shown below. What is the area of the paper flower? Provide your answer in terms of π .



Area of medium semicircle + (area of larger semicircle – area of small semicircle)

$$\left(\frac{1}{2}\right) (\pi \times (6 \text{ cm})^2)$$

$$+ \left(\left(\frac{1}{2}\right) (\pi \times (9 \text{ cm})^2) - \left(\frac{1}{2}\right) (\pi \times (3 \text{ cm})^2) \right)$$

$$18\pi \text{ cm}^2 + 40.5\pi \text{ cm}^2 - 4.5\pi \text{ cm}^2 = 54\pi \text{ cm}^2$$

$$54\pi \text{ cm}^2 \times 4$$

$$216\pi \text{ cm}^2$$

The area is 216 π cm².

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