

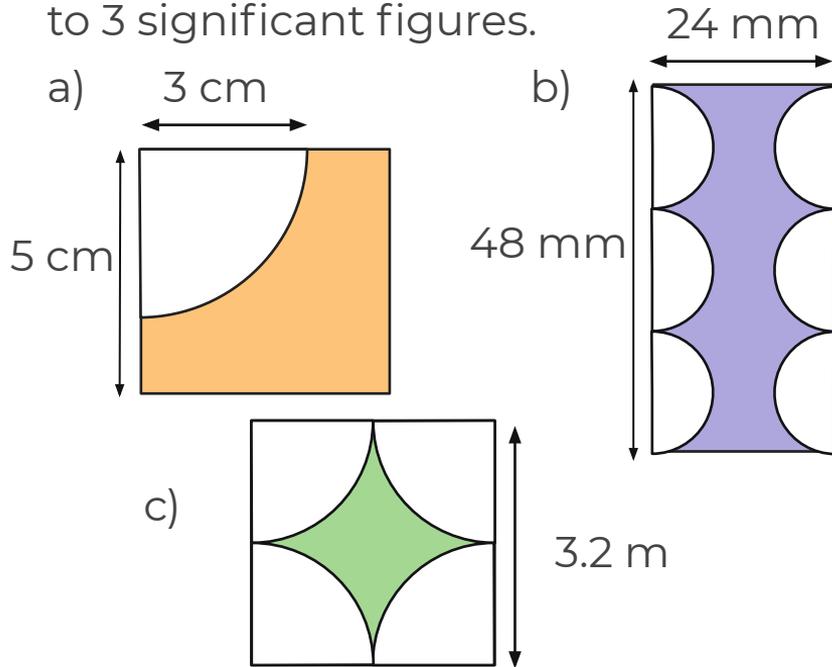
Calculate area of compound shapes with circles

Miss Parnham

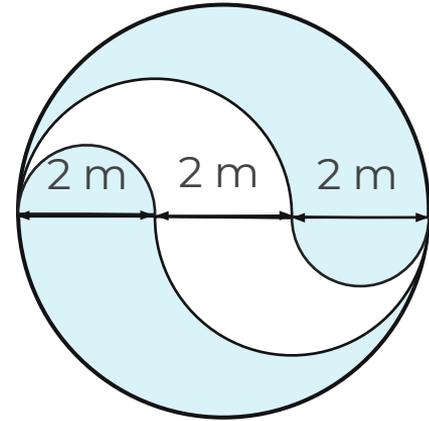


Calculate area of compound shapes with circles

1. Calculate the shaded areas correct to 3 significant figures.



2. In terms of π , how much area is unshaded?



In this diagram, what is the ratio of unshaded area to shaded area?



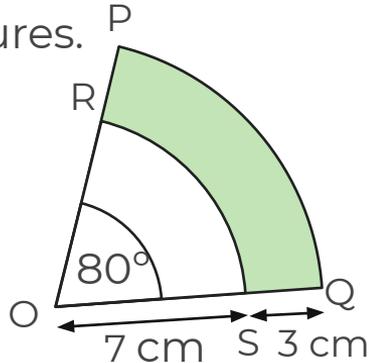
Calculate area of compound shapes with circles

3. OPQ and ORS are sectors of circles with centre O. Angle POQ is 80° .

OS = 7 cm and SQ = 3 cm.

Find the area of the shaded region.

Give your answer correct to 3 significant figures.

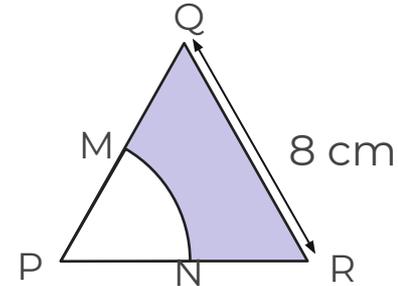


4. The diagram shows an equilateral triangle PQR with side lengths 8 cm.

M is the midpoint of PQ.

N is the midpoint of PR.

PMN is a sector of a circle, centre P.



Calculate the shaded area, correct to 3 significant figures.

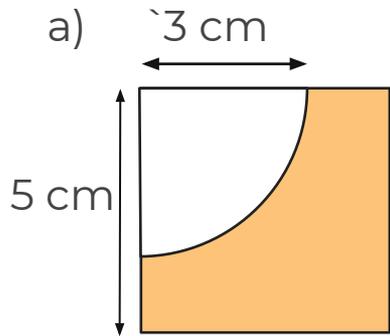


Answers



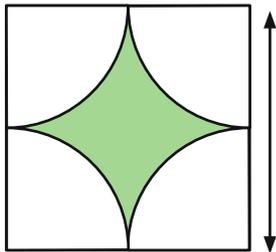
Calculate area of compound shapes with circles

1. Calculate the shaded areas correct to 3 significant figures.

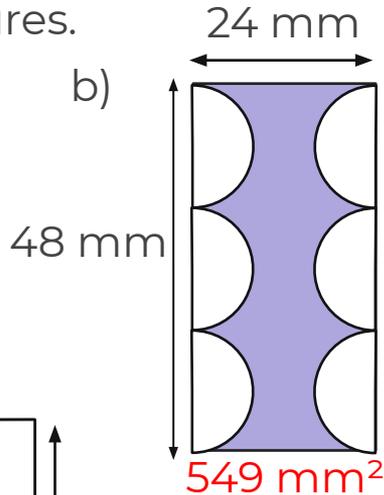


$$17.9 \text{ cm}^2$$

c)



$$2.20 \text{ m}^2$$

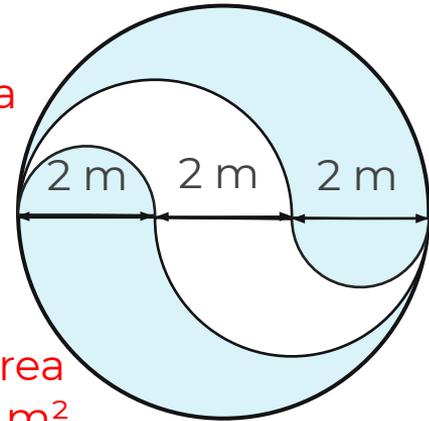


$$549 \text{ mm}^2$$

2. In terms of π , how much area is unshaded?

Shaded area

$$9\pi - 4\pi + \pi = 6\pi \text{ m}^2$$



Unshaded area

$$9\pi - 6\pi = 3\pi \text{ m}^2$$

In this diagram, what is the ratio of unshaded area to shaded area? **1:2**



Calculate area of compound shapes with circles

3. OPQ and ORS are sectors of circles with centre O. Angle POQ is 80° .

OS = 7 cm and SQ = 3 cm.

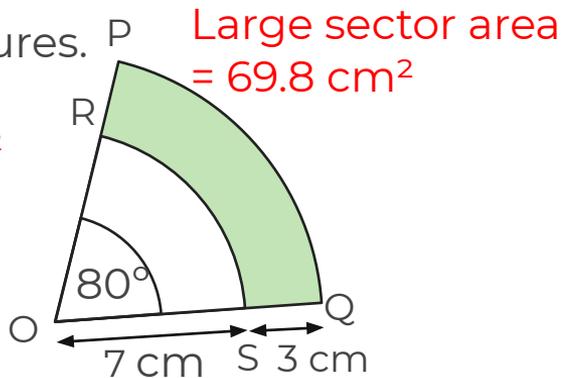
Find the area of the shaded region.

Give your answer correct to 3

significant figures.

Small sector area = 34.2 cm^2

Shaded area = 35.6 cm^2



4. The diagram shows an equilateral triangle PQR with side lengths 8 cm.

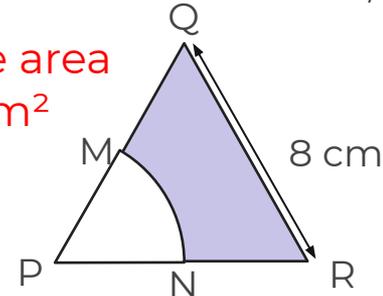
M is the midpoint of PQ.

N is the midpoint of PR.

PMN is a sector of a circle, centre P.

Triangle area = 27.7 cm^2

Sector area = 8.38 cm^2



Shaded area = 19.3 cm^2

Calculate the shaded area, correct to 3 significant figures.

