

Module 6.C : Geometry

SECTION 1 : Find the area of a composite figure.

Area of a rectangle:

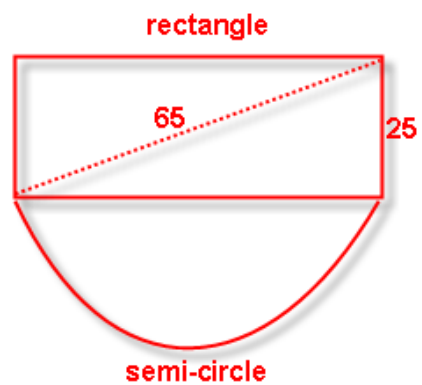
- $A = LW$, where L is the length and W is the width.

Area of a circle:

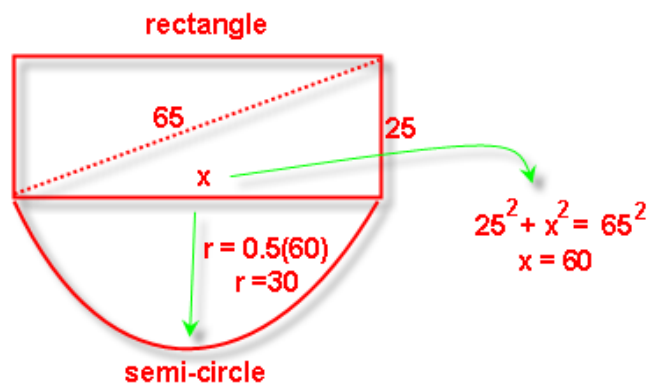
- $A = \pi r^2$, where r is the radius.

EXERCISE 3

Find the area of the composite figure.



SOLUTION



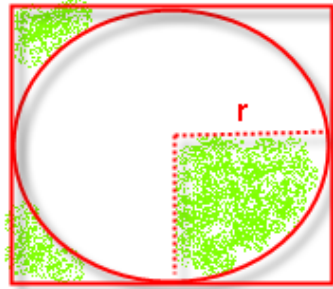
Area is the area of the rectangle plus half the area of the circle. We have:

$$25(60) + \frac{1}{2} \cdot \pi \cdot 30^2 \approx 1500 + 1413.7 \approx 2913.7$$

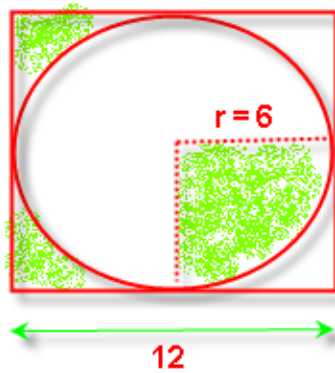
SECTION 2 : Find the area of the shaded portion of a figure.

EXERCISE 4

A circle with a radius of 6 is inscribed inside a square.
Find the area of the shaded portion below exactly and to the nearest tenth.



SOLUTION

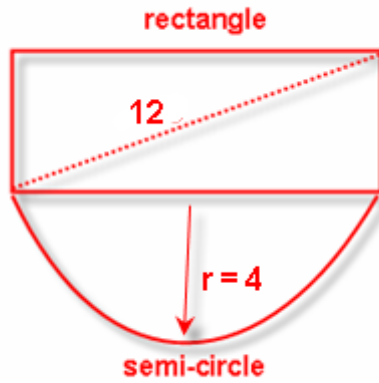


The area is half the area of the region between the square and the circle plus one-quarter of the area of the circle. We have

$$A = \frac{1}{2} [12^2 - \pi(6)^2] + \frac{1}{4} \pi(6)^2 = \frac{1}{2} [144 - 36\pi] + \frac{1}{4} \pi 36 = 72 - 18\pi + 9\pi = 72 - 9\pi \approx 43.7$$

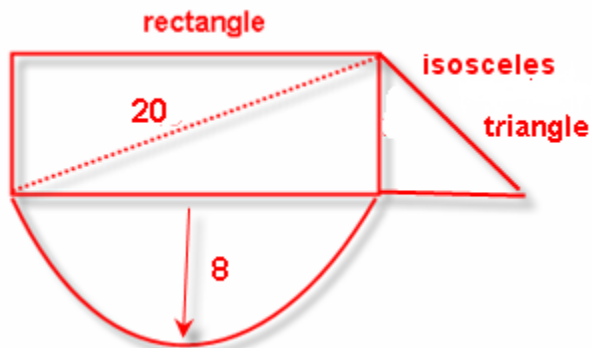
MODULE 6C - ASSESSMENT

_____5. Find the area of a composite figure to the nearest tenth.



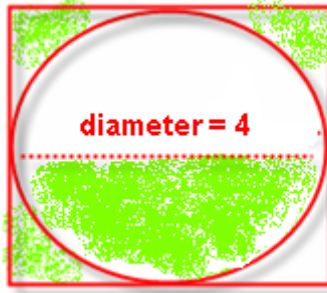
- A 96.7 B 60.6 C 66.6 D 74.6 E I do not know

_____6. Find the area of a composite figure to the nearest tenth.



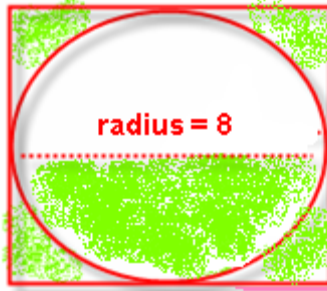
- A 364.5 B 336 C 400 D 473.1 E I do not know

_____7. A circle with a diameter of 4 is inscribed inside a square.
Find the area of the shaded portion below to the nearest tenth.



- A 9.7 B 3.4 C 8.9 D 8 E I do not know

_____8. A circle with a radius of 8 is inscribed inside a square.
Find the area of the shaded portion below to the nearest tenth.



- A 160 B 155.5 C 128 D 8 E I do not know