ANSWERS

AREA OF COMPOUND SHAPES

Instructions: Read each problem carefully, divide the compound shape into simpler geometric figures, calculate the area of each section, and add or subtract areas as needed to find the total or remaining area.

a) A board is rectangular in shape (60 cm by 40 cm), but has a circular hole in the center with a radius of 10 cm. What is the usable board area?

Answer:

Rectangle: $60 \times 40 = 2{,}400\ cm^2$

Circle: $\pi r^2 = 3.14 \times 10^2 = 314\ cm^2$

Remaining Area: $2{,}400 - 314 = 2{,}086\ cm^2$

b) A terrace is shaped like a rectangle measuring 12 m by 8 m, but it has an isosceles triangle cut out at one end with a base of 8 m and a height of 4 m. What is the area of the remaining terrace?

Answer:

Rectangle: $12 \times 8 = 96\ m^2$

Triangle: $\frac{1}{2} \times 8 \times 4 = 16\ m^2$

Remaining Area: $96 - 16 = 80\ m^2$

c) A swimming pool is made up of a 20 m by 10 m rectangle with a semicircle of radius 5 m added to one end. What is the total area of the pool?

Answer:

Rectangle: $20 \times 10 = 200\ m^2$

Semicircle: $\frac{1}{2} \pi r^2 = \frac{1}{2} \times 3.14 \times 5^2 = 39.25\ m^2$

Total Area: $200 + 39.25 = 239.25\ m^2$

How Did You Do? ☺ 😐 ☹