

U8D2

Warm Up:

Define perimeter.

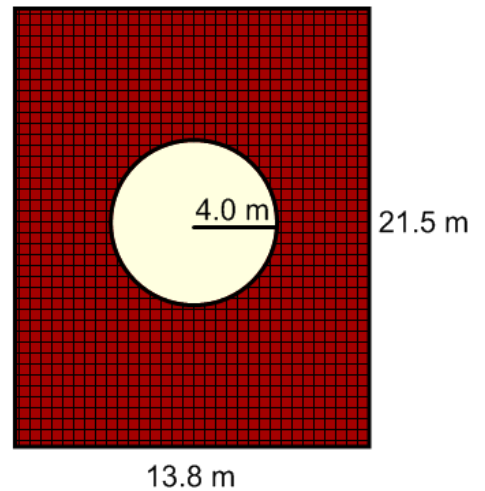
Define Area.

Perimeter and Area of Composite Figures

Often complex shapes can be divided into simple shapes to calculate perimeter and area.

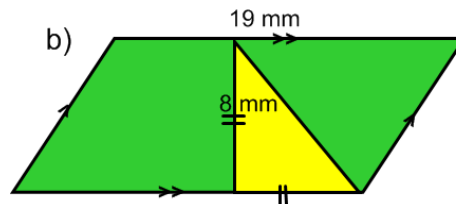
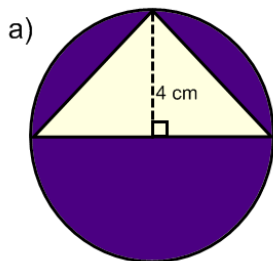
Example 1. A circular swimming pool is to be bordered by interlocking brick as shown in the diagram.

a) Determine the area to be covered by interlocking brick.



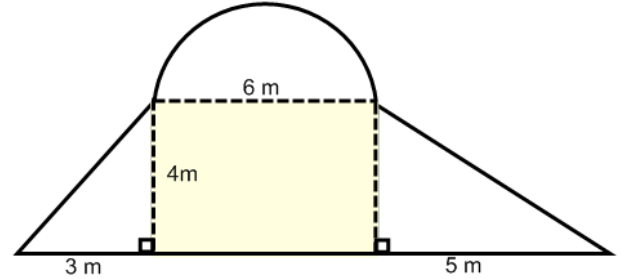
b) If the bricks are sold by the skid, and each skid has enough bricks to cover 9 m^2 , how many skids must be purchased?

Example 2. Calculate the area of the shaded region.



Example 3. A restaurant is building an outdoor patio in the shape of the diagram below. The patio area will be made of interlocking paving stones with different stones along the border. The paving stones cost $\$52.95/\text{m}^2$. The border stones cost $\$15.50/\text{m}$. How much will the materials for the patio cost, including 13% taxes? Allow an additional 10% to account for stones that must be cut for the design.

Step 1: Calculate the unknown outside measurements.



Step 2: Calculate the total perimeter and add an additional 10%.

Step 3: Identify the simple shapes that make up the area. Calculate the area of each shape.

Step 4: Calculate the total area and add 10% for waste.

Step 5: Calculate the total cost before taxes.

Step 6: Calculate the total cost including taxes.

Example 4: Calculate the perimeter of the shaded region. Round your answer to one decimal place.

