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§2.3 Two-Dimensional Figures

Today we will learn how to find perimeter, circumference, and area of two-dimensional geometric shapes.

Definitions:

Polygon -

Perimeter –

Circumference -

Area –

Equilateral polygon -

Equiangular polygon –

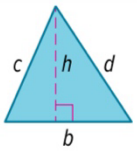
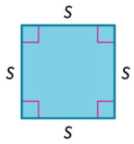
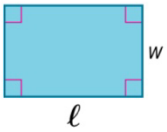
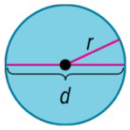
Regular polygon -

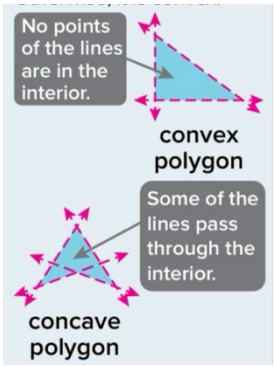
Concave –

Convex -

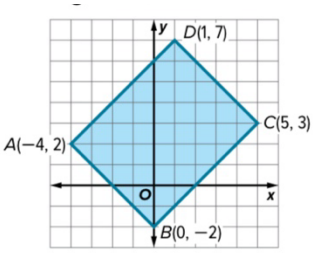
Geometric model -

Perimeter, Circumference, and Area

Triangle	Square
	
Perimeter $P = b + c + d$ Area $A = \frac{1}{2}bh$	Perimeter $P = s + s + s + s = 4s$ Area $A = s^2$
Rectangle	**Circle**
	
Perimeter $P = \ell + w + \ell + w = 2\ell + 2w$ Area $A = \ell w$	Circumference $C = 2\pi r$ or $C = \pi d$ Area $A = \pi r^2$



Example 2.3.1: Find the perimeter and area of $\square ABCD$.



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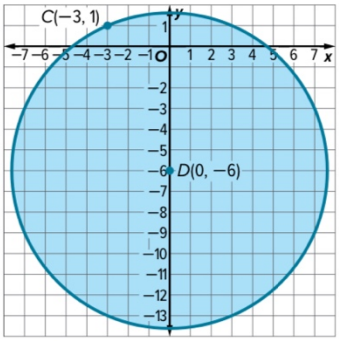
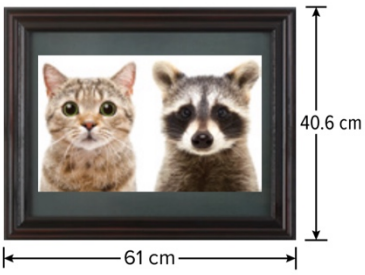
Example 2.3.2: Find the circumference and area of the circle. Round to the nearest tenth if necessary.

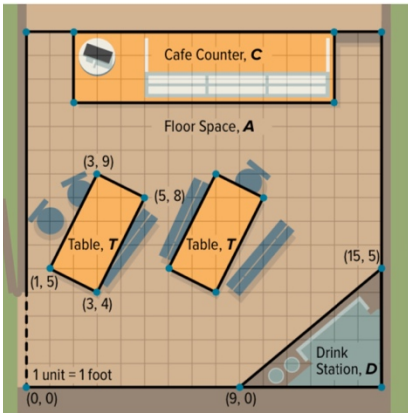


Activity 2.3.3: Use an appropriate two-dimensional model and the dimensions provided in the image to calculate the perimeter and area of the framed art.



Example 2.3.4: BUSINESS Isaiah owns a small café.
A new fire code states that there must be 15 square feet of free space for every customer in the café.

a) How many people can be in the café?



b) If Isaiah wants to line the tables and drink station with garland, then how much garland does Isiah need?