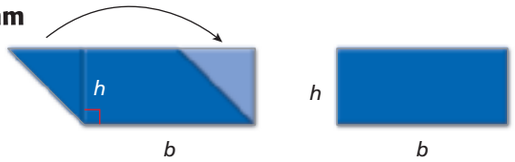
Section Overview

Professional Development

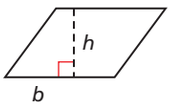
Developing Area and Perimeter Formulas — Lessons 9-1, 9-2

Why? Learning the development of area and perimeter formulas increases the understanding of these concepts.

Parallelogram

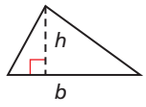


$A = bh$

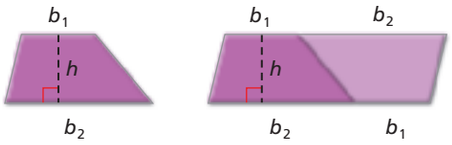


Triangle

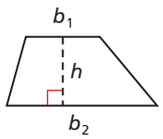
$A = \frac{1}{2}bh$



Trapezoid

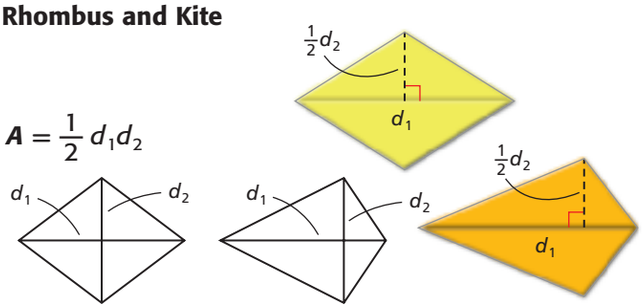


$A = \frac{1}{2}(b_1 + b_2)h$

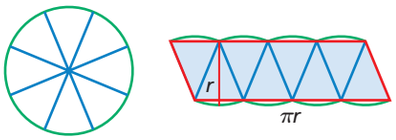


Rhombus and Kite

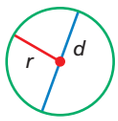
$A = \frac{1}{2}d_1d_2$



Circle

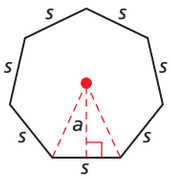


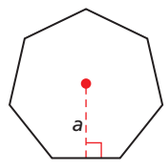
$C = 2\pi r = \pi d$ $A = \pi r^2$



Regular Polygon

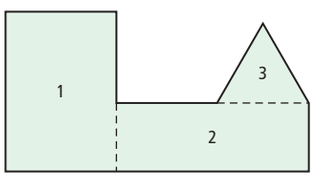
with perimeter $P = ns$ $A = n\left(\frac{1}{2}as\right) = \frac{1}{2}aP$



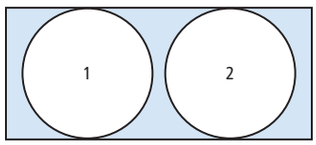


Composite Figures — Lesson 9-3

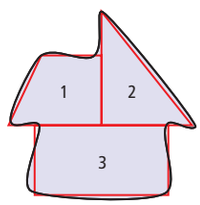
Why? Most real-world figures are composed of different shapes. The Area Addition Postulate allows you to find the areas of these composite figures.



$A = A_1 + A_2 + A_3$



$A_{\text{shaded region}} = A_{\text{rectangle}} - A_1 - A_2$



$A_{\text{irregular shape}} \approx A_1 + A_2 + A_3$