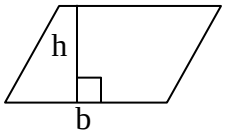
Section 13.2 **Summary of Area formulas**

In class we used models to show the development of the area formulas.
The area of a polygon is the measure of the region enclosed by the polygon.
The basic concept is "how long" times "how tall" the polygon is and we relate these to the area of a parallelogram.

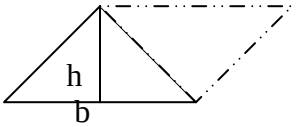
Rectangle $A = L\,W$

Parallelogram $A = b\,h$

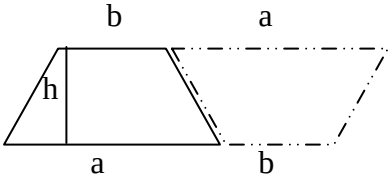


Triangle $A = \frac{1}{2}\,b\,h$

Notice that the triangle is half of a parallelogram with the same base and height as the triangle.



Trapezoid $A = \frac{1}{2}\,(a + b)\,h$



Circle $A = \pi\,r^2$

This formula can also be developed from the formula of a parallelogram
$A = a\,b = \frac{1}{2}\,C\,r = \frac{1}{2}\,(2\pi\,r)\,r = (\pi\,r)\,r = \pi\,r^2$

Please see the pictures on this website http://britton.disted.camosun.bc.ca/areacirc/areacirc.htm
Read the lecture notes for section 13.2.

If you have a TI 84 calculator, use the APPS key to find the "AreaForm" application. This gives you animations to show how the formulas of the triangle, trapezoid and circle are related to the formula of a parallelogram.