Unit 8: Perimeter & Area
Study Guide

AREA
***Area** – the amount of surface inside a closed boundary. It is measured in square units.
Examples: square centimeter - cm^2,
square inches - $in.^2$
square meters - m^2

PERIMETER
***Perimeter** – the distance around a 2-dimensional shape, along the boundary of the shape. (The distance around a circle is called the circumference.)

FORMULAS (Rules for finding the value of something.)
***Fraction of the Whole** - To find a fraction of a whole, divide the whole number by the denominator, multiply that quotient time the numerator, the resulting product is the fraction of the whole number.
Example; 2/3 of 27 = ? (27 divided by 3 equals 9, 9 times 2 equals 18.)
***More Fraction of the Whole Formulas:**
        If the fraction is missing… just make the answer the numerator and the whole
        number the denominator. Reduce if possible.)
        Example: ? of 24 = 8 (8/24 of 24 = 8 or 1/3 of 24 = 8)

        If the whole number is missing… just do the Fraction of the Whole Formula
        backwards or "over the top."
        Example: 2/3 of ? = 14 (14 divided by 2 equals 7, 7 times 3 = 21.)

Area
***Area of a **Rectangle** $A = l \times w$ or $A = b \times h$
***Area of a **Parallelogram**: $A = b \times h$
(Don't forget that for a parallelogram, drawing a line, which forms a perpendicular to the base, forms the height measurement. You do not measure the side of the parallelogram.)
***Area of a Triangle**: $A = \frac{1}{2} (b \times h)$

TERMINOLOGY
***base** (The side on which the parallelogram or triangle sits.) It is also the **length**.
***width** or **height** (The shortest distance between the base & opposite side.)
***variables** – the letters in a formula. They represent numbers.

MIXED MEASUREMENTS
*Two units written together to express one measurement
*Don't forget to write mixed measurements in their simplest form.
Example: 1'15" = 2'3"

SCALE
***Scale** – The ratio of a distance on a map, globe, or drawing to an actual distance.
***Scale drawing** – a drawing of an object or a region in which all parts are drawn to the same scale.

TRIANGLES
***Triangles**: -3-sided, 3 angles, 3 vertices - polygon
　　　　　　　-the sum of the measures of the angles is always 180^0
　　　　　　　-the area of a triangle is ½ the area of a parallelogram
***Types:**
1. **perpendicular** - lines that form a right angle
2. **equilateral triangle** - sides all the same length
3. **right triangle** - one right angle
4. **isosceles triangle** - two sides same length
5. **scalene triangle** - sides all different lengths

Secure Goals
Students should be able to:
1. Find the perimeter of a polygon.
2. Find the area of a polygon drawn on a grid.
3. Draw a rectangle with a given area of perimeter.
4. Solve number stories involving area.
5. Add and subtract fractions.
6. Predict the outcomes of a spinner experiment.
7. Express the probability of a block-drawing event as a fraction.