Unit 4
Rotations
A rotation of 90° - (x, y) →(-y, x)
A rotation of 180° - (x, y) →(-x, -y)
A rotation of 270° - (x, y) →(y, -x)

Dilations
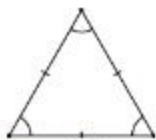Image length
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Actual length

The formula for slope - $\dfrac{Y_2-Y_1}{X_2-X_1}$
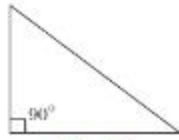
Unit 5
An exterior angle of a triangle
- The measure of an exterior angle of a triangle is equal to the sum of the measures of the two nonadjacent interior angles
- The measure of an exterior angle of a triangle is greater than the measure of either nonadjacent interior angle
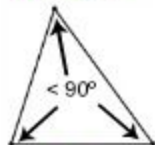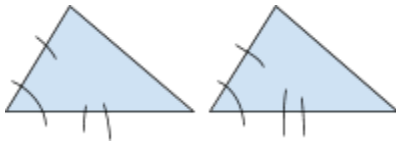

**Slope intercept form -** y = Mx + B
Standard form - Ax + By = C

Side angle Side (SAS) congruence theorem - if two sides and the included angle of one triangle are congruent to two sides and the included angle of a second triangle, then the two triangles are congruent.
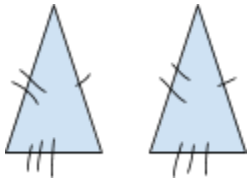
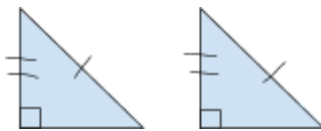**Base angle theorem** - if two sides of a triangle are congruent, then the angles opposite them are congruent

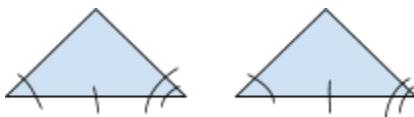If two angles of a triangle are congruent, then the sides opposite them are congruent
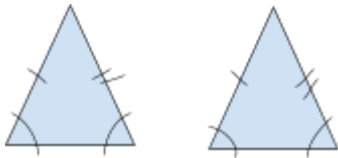
Side Side Side (SSS) congruence theorem - if three sides of one triangle are congruent to three sides of a second triangle, then the two triangles are congruent.

Hypotenuse-Leg (HL) congruence theorem - if the hypotenuse and a leg of a right triangle are congruent to the hypotenuse and a leg of a second right triangle, then the two triangles are congruent.

Angle Side Angle (ASA) congruence theorem - if two angles and the included side of one triangle are congruent to two angles and the included side of a second triangle, then the two triangles are congruent

Angle angle side (AAS) congruence theorem - if two angles and a non-included side of one triangle are congruent to two angles and the corresponding non-included side of a second triangle then the two triangles are congruent.