

Name: KEY Date: _____ Period: _____

CCGPS Analytic Geometry

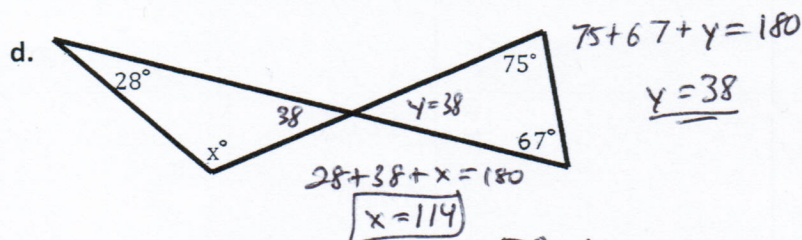
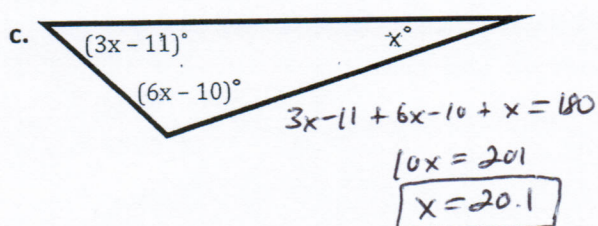
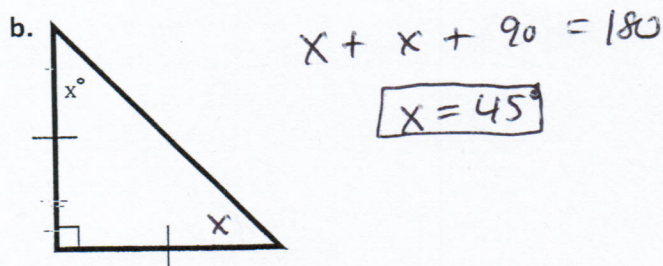
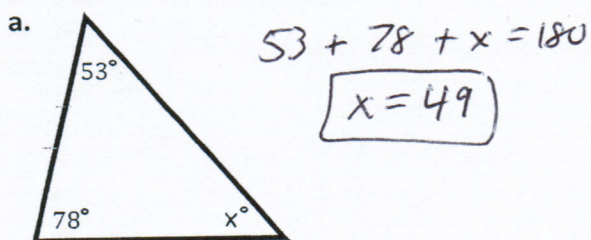
Notes: Interior and Exterior Angles of Triangles

Homework: Attached worksheet

Essential Question: What are the steps to finding the measure of interior and exterior angles of a polygon?

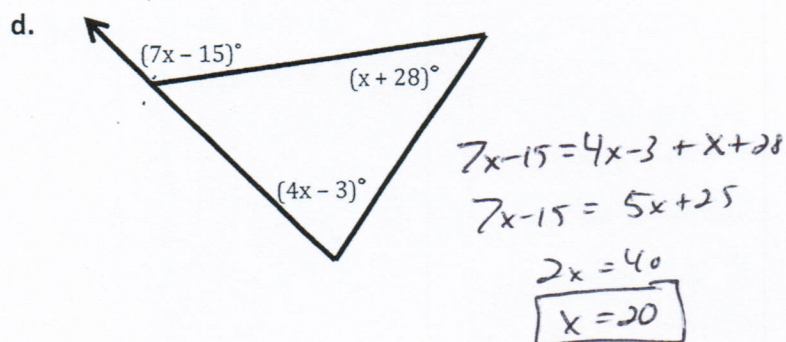
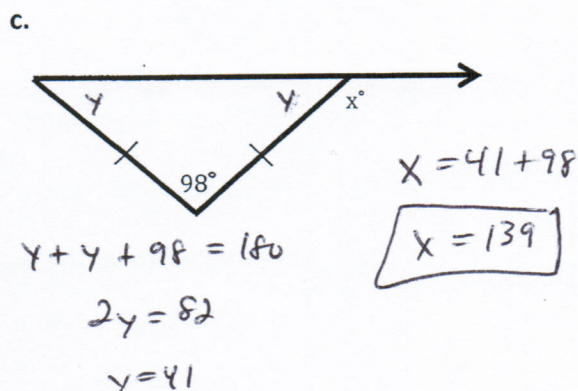
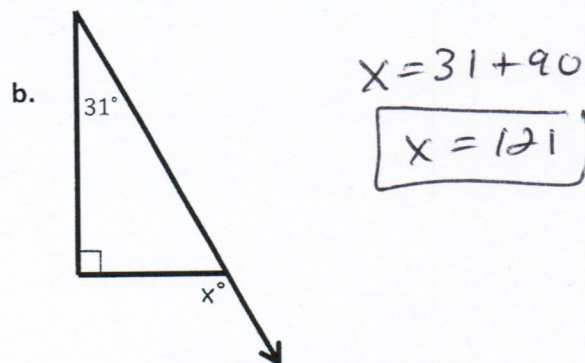
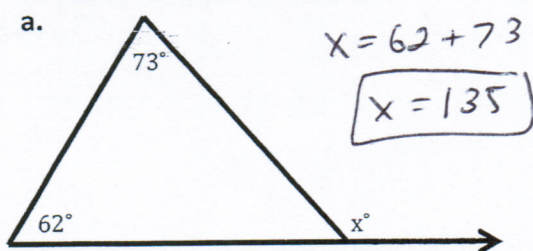
The Triangle Angle Sum Theorem states that the sum of the angles in a triangle is 180° .

Examples: Find the value of x.



The Exterior Angle Theorem states that the measure of an exterior angle of a triangle is EQUAL to the sum of the measures of the two non-adjacent interior angles.

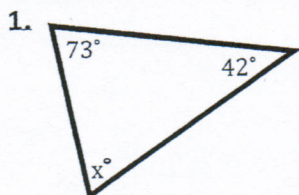
Examples: Find the value of x.



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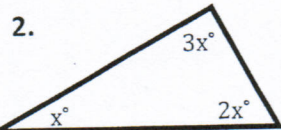
CCGPS Analytic Geometry
Homework: Interior and Exterior Angles of Triangles

Directions: Find the value of x .



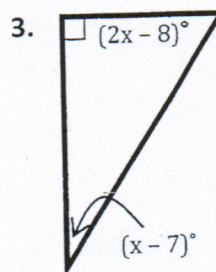
$$x + 42 + 73 = 180$$

$$x = 65$$



$$x + 2x + 3x = 180$$

$$x = 30$$



$$2x - 8 + x - 7 + 90 = 180$$

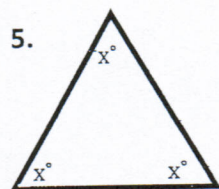
$$3x = 105$$

$$x = 35$$



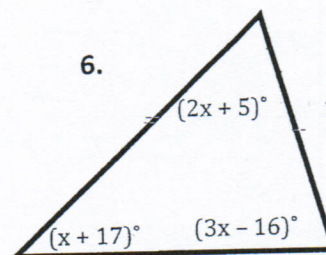
$$x + 18 + 32 = 180$$

$$x = 130$$



$$x + x + x = 180$$

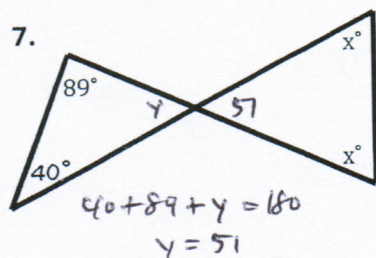
$$x = 60$$



$$x + 17 + 2x + 5 + 3x - 16 = 180$$

$$6x = 174$$

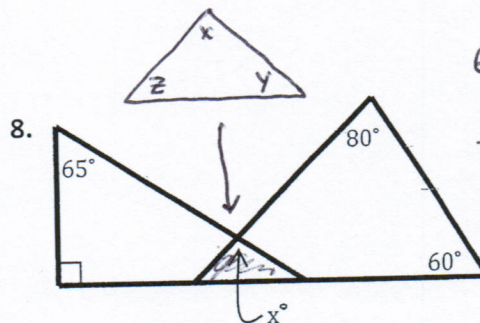
$$x = 29$$



$$57 + x + x = 180$$

$$2x = 123$$

$$x = 61.5$$



$$65 + 90 + y = 180$$

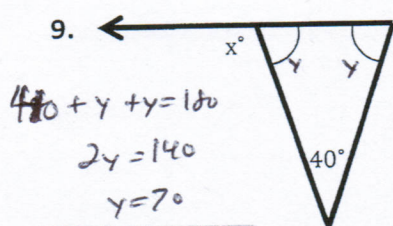
$$y = 25$$

$$80 + 60 + z = 180$$

$$z = 40$$

$$25 + 40 + x = 180$$

$$x = 115$$



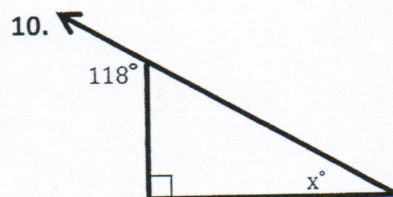
$$40 + y + y = 180$$

$$2y = 140$$

$$y = 70$$

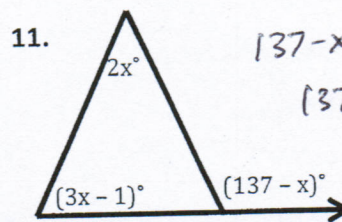
$$x = 40 + 70$$

$$x = 110$$



$$118 = x + 90$$

$$x = 28$$

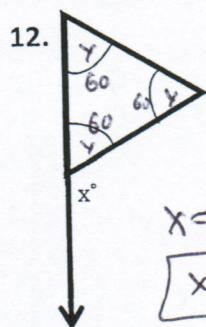


$$137 - x = 2x + 3x - 1$$

$$137 - x = 5x - 1$$

$$6x = 138$$

$$x = 23$$



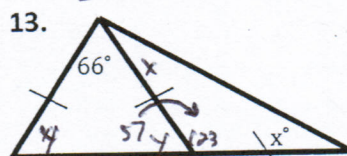
$$y + y + y = 180$$

$$3y = 180$$

$$y = 60$$

$$x = 60 + 60$$

$$x = 120$$



$$y + y + 66 = 180$$

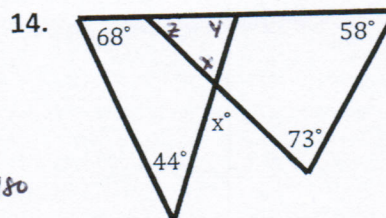
$$2y = 114$$

$$y = 57$$

$$123 + x + x = 180$$

$$2x = 57$$

$$x = 28.5$$



$$68 + 44 + y = 180$$

$$y = 68$$

$$73 + 58 + z = 180$$

$$z = 49$$

$$x + 68 + 49 = 180$$

$$x = 63$$