**Objective:**

**Do Now:** Match the triangle descriptions on the left with the specific names from the right.

1. Side lengths 2cm, 3cm, 4cm A. Equilateral
2. Side lengths 3cm, 2cm, 3cm B. Scalene
3. Side lengths 4cm, 4cm, 4cm C. Obtuse
4. Angles measures 60°, 60°, 60° D. Equiangular
5. Angle measures 30°, 60°, 90° E. Isosceles
6. Angle measures 20°, 145°, 15° F. Right

**Interior Angles:** The Interior Angles of a Triangle add to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Find the value of x and the missing angle measures:

A

∠A=65°

∠B=x + 15

∠C=x

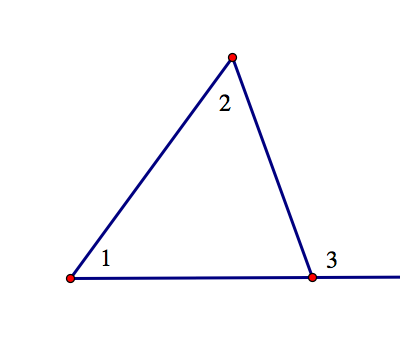
C

B

**The Exterior Angle Theorem:**

The measure of an exterior angle of a triangle is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Find the missing angle measure:

∠1=45°

∠2=60°

∠3=

**Find the measurement of the missing angles:**

1. A 2. D 3. G H

63° 2x+12° 6x+10°

2x+8°

67° 32°

B C E F K

m ∠BCA = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ m ∠EDF = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ m ∠HKG = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve for x then find the measure of each angle. Classify each triangle by its angles.**

4. m∠A = (x + 30) ° = \_\_\_\_\_\_\_

m∠B = x° = \_\_\_\_\_\_\_

m∠C = (x + 60)° =\_\_\_\_\_\_\_\_

5. m∠A = (6x + 11) ° = \_\_\_\_\_\_\_

m∠B = (3x + 2)° = \_\_\_\_\_\_\_

m∠C = (5x - 1)° =\_\_\_\_\_\_\_\_

6. m∠A = 2x ° = \_\_\_\_\_\_\_

m∠B = (3x – 10)° = \_\_\_\_\_\_\_

m∠C = (110 - x)° =\_\_\_\_\_\_\_\_

x = \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ triangle x = \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ triangle x = \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ triangle

7. m∠A = x ° = \_\_\_\_\_\_\_

m∠B = 2x° = \_\_\_\_\_\_\_

m∠C = 3x° =\_\_\_\_\_\_\_\_

x = \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ triangle

8. m∠A = (3x - 17) ° = \_\_\_\_\_\_\_

m∠B = (x + 40)° = \_\_\_\_\_\_\_

m∠C = (2x - 5)° =\_\_\_\_\_\_\_\_

x = \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ triangle

9. m∠A =2x ° = \_\_\_\_\_\_\_

m∠B = x° = \_\_\_\_\_\_\_

m∠C = (x - 20)° =\_\_\_\_\_\_\_\_

x = \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ triangle

**Solve for x then find the measure of the exterior angle.**

10. 11.

2x

50°

40

°

x°

60°

**x = \_\_\_\_\_\_\_ x = \_\_\_\_\_\_\_**

**Exterior angle = \_\_\_\_\_\_\_\_ exterior angle = \_\_\_\_\_\_\_**

**Challenge:**

4x-10

(6x-7)

(103-x)

(4x+8)

13. 14. 15.

2x°

(2x+3)

3x+100

51°

**x = \_\_\_\_\_\_\_ x = \_\_\_\_\_\_\_ x = \_\_\_\_\_\_\_\_**

**Exterior angle = \_\_\_\_\_\_\_\_ exterior angle = \_\_\_\_\_\_\_ exterior angle = \_\_\_\_\_\_\_**