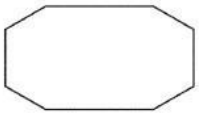
ICA-Angles properties of polygons – 2.4 **/25 = ____%** Name: _____

1. Determine the sum of the measures of the interior angles of this polygon.



a. 1080° b. 1440°

c. 720° d. 540°

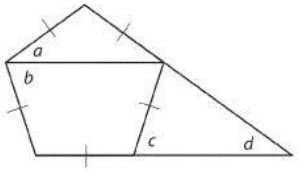
4. Determine the sum of the measures of the angles in a 9-sided convex polygon.

a. 1720° b. 1440° c. 1080° d. 1260°

2. Each interior angle of a regular convex polygon measures 144°. How many sides does the polygon have?

a. 10 b. 11 c. 8 d. 9

3. Determine the value of *a and d*.



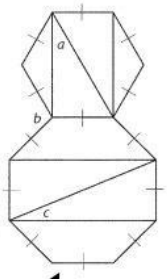
a. 54^0 , 36^0

b. 30^0 , 36^0

c. 36^0 , 36^0

d. 32^0 , 36^0

e. 34^0 , 36^0



Use for Question **5,6, and 7**

5. Determine the value of *b*.

a. 95^0 b. 100^0

c. 120^0 d. 105^0

6. Determine the value of *a*.

a. 60^0 b. 34^0

c. 30^0 d. 28^0

7. Determine the value of *c*.

a. 22.5^0 b. 30^0

c. 67.5^0 d. 26.5^0

Short Answer (18pts)

6. Determine the sum of the measures of the angles in an 18-sided convex polygon. Show your calculation.

Sum of Interior angles = _____ 2

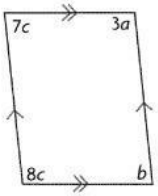
7. Each interior angle of a regular convex polygon measures 156°. How many sides does the polygon have? Show your calculations.

# of Sides = _____ 3

8. Abbie is measuring the exterior angles of a convex pentagon. So far, she has measured 90°, 90°, 120°, and 40°. What is the measure of the last ***exterior*** angle? Show your calculation.

Angle = _____ 2

9. Determine the values of *a*, *b*, and *c*.

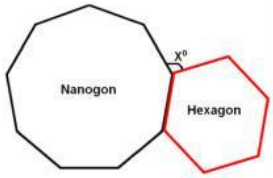


a = ____

b = ____

3 c = ____

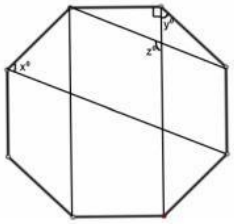
10. In the diagram below, two regular polygons are shown. Calculate x.



X^0 = _____

3

11. Given the Octagon below, Calculate x, y and z.



x = _____

y = _____

5 z = _____

LIVEWORKSHEETS

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LIVEWORKSHEETS