**Study Guide Integrated 2: Chapter 8**

**Directions:** Use this study guide to practice Chapter 8 problems. The answers are listed below so that you can check your answers. This study guide is optional – but a great way to study! If you have questions about how to do any of these problems, check with your peers or email me!

1. Two quadrilaterals are similar. The smaller has a perimeter of 20 cm and an area of 60 cm2. If the perimeter of the larger quadrilateral is 30 cm then the area of the larger quadrilateral is:

A.        40 cm2

B.        70 cm2

C.        90 cm2

D.        135 cm2

E.        None of these

1. Calculate the sum of the measures of the interior angles of an 83-gon.
2. Calculate the value of *x*.



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1. If each exterior angle on a regular polygon has a measure of 12°, how many sides will the polygon have?
2. An exterior angle of a regular polygon measures 18°.

How many sides does the polygon have?

1. If figure A and figure B are similar with a ratio of similarity of 6, that is, 6 to 1, and the perimeter of figure A is 54 units, what is the perimeter of figure B?
2. If figure A and figure B are similar with a ratio of similarity of 1/8 and the area of figure A is 13 square units, what is the area of figure B?

1. Determine the area of the shaded sector in each circle below. In each case, point O is the center.



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1. How many sides does the regular polygon have if each interior angle has 156° measure?
2. Calculate the measure of each interior angle of a regular 30-gon

Answer Key:

1. D
2. 14,580
3. x = 38
4. x = 64
5. n = 30
6. n = 20
7. 9 units
8. 832 sq. units
9. 2$π$
10. $\frac{49}{3}π$
11. n = 15
12. 168