

Mathematics, Grade 8

- 29 Molly formed three polygons—a triangle, a rectangle, and a pentagon—with string. She calculated the sum of the measures of the interior angles for each polygon and entered her data in the chart shown below.

Type of Polygons	Number of Sides	Sum of the Measures of the Interior Angles
Triangle	3	180°
Rectangle	4	360°
Pentagon	5	540°
Hexagon	6	?
Octagon	8	?
Unnamed Polygon	?	2340°
n -sided Polygon	n	?

- What is the sum of the measures of the interior angles of a hexagon?
- What is the sum of the measures of the interior angles of an octagon?
- How many sides does an unnamed polygon have if the sum of the measures of the interior angles is 2340°?
- Explain how you would find the sum of the measures of the interior angles of an n -sided polygon.

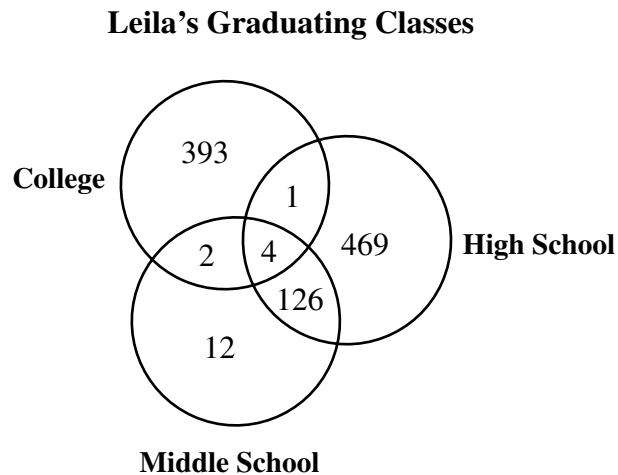
Reporting Category for Item 29: **Geometry**

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Session 2, Multiple-Choice Questions



- 30 The Venn diagram below shows Leila's graduating classes from middle school, high school, and college.



How many students graduated together from **both** Leila's middle school and high school?

- A. 133
- B. 132
- C. 131
- D. 130

Reporting Category for Item 30: *Data Analysis, Statistics, and Probability*

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- 31 The chart shows the area of the eight largest counties in Massachusetts.

**Area of Selected
Massachusetts Counties**

Selected Counties in Massachusetts	Area (square miles)
Berkshire	931
Bristol	556
Franklin	702
Hampden	618
Hampshire	529
Middlesex	824
Plymouth	661
Worcester	1513

What is the median area, to the nearest square mile, of the 8 largest counties in Massachusetts?

- A. 661 square miles
- B. 682 square miles
- C. 702 square miles
- D. 792 square miles

Reporting Category for Item 31: Data Analysis, Statistics, and Probability

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- 32 What value of x makes the equation below true?

$$3x + 2(x - 5) = 50$$

- A. 8
- B. 9
- C. 11
- D. 12

Reporting Category for Item 32: Patterns, Relations, and Algebra