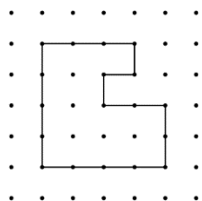


Activity 1 Assessment

Determining the Perimeter of Polygons

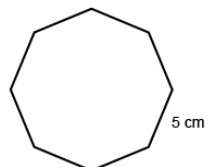
Using Formulas to Determine Perimeter of Polygons

Uses standard units to measure the perimeter of irregular polygons by adding side lengths.



"The polygon is on 1-cm dot paper. I added the lengths of the sides: $3\text{ cm} + 4\text{ cm} + 4\text{ cm} + 2\text{ cm} + 2\text{ cm} + 1\text{ cm} + 1\text{ cm} + 1\text{ cm} = 18\text{ cm}$; The perimeter of the shape is 18 cm."

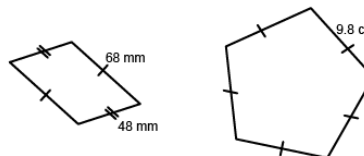
Uses $P = \#$ of equal sides \times length of a side to calculate the perimeter of regular polygons.



Regular Octagon

"In a regular octagon, all sides are the same length. I multiply the length of a side by the number of sides: $P = 8 \times 5\text{ cm} = 40\text{ cm}$. The perimeter is 40 cm."

Identifies the appropriate formula to determine the perimeter of different polygons.



"The irregular polygon is a parallelogram, so I can use the formula: $P = 2(a + b)$: $2(48\text{ mm} + 68\text{ mm}) = 2(116\text{ mm}) = 232\text{ mm}$. The pentagon is a regular pentagon, so I can use the formula $P = 5s$: $5 \times 9.8\text{ cm} = 49.0\text{ cm}$."

Fluently applies formulas for determining perimeter of polygons to solve problems.

A soccer field is 125 m by 85 m. A football field is about 92 m by 49 m. Which field has the greater perimeter?

"Both fields are rectangular, so I will use the formula for the perimeter of a rectangle: $P = 2(l + w)$.

Soccer field:
 $P = 2(125\text{ m} + 85\text{ m}) = 420\text{ m}$.

Football field:
 $P = 2(92\text{ m} + 49\text{ m}) = 282\text{ m}$

The soccer field has the greater perimeter."

Observations/Documentation