

Practice 9-4

Draw a Diagram

Solve by drawing a diagram.

- How many diagonals does a quadrilateral have?

- Which quadrilaterals always have congruent diagonals?

- Find a formula for the number of diagonals d in a polygon with n sides. Complete the table to help you. Look for a pattern.

Figure	Number of sides	Number of vertices	Number of diagonals from each vertex	Total number of diagonals
triangle	3			
quadrilateral	4			
pentagon	5			
hexagon	6			
octagon	8			
n -gon	n			

$d =$ _____

- One day in the lunch line, Maurice was ahead of Aquia and behind Rochelle. Rochelle was ahead of Shequille and behind Whitney. Shequille was ahead of Maurice. Who was last?

- A mail carrier leaves the post office at 10:00 A.M. and travels 4 miles south, then 7 miles east, then 5 miles south, then 10 miles west, and 9 miles north. At the end of her route, how far and in which direction is the mail carrier from the post office?

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