

Point Power

Find the important points in each figure.

GRADE 4 • 4.MG.4.b

4.MG.4.b "Describe endpoints and vertices in relation to lines, line segments, rays, and angles."

NAME _____

DATE _____

ENDS AND CORNERS

A line goes forever in both directions, so it has no endpoints. A segment has 2 endpoints, and a ray has 1 endpoint. An angle has a vertex where its two sides meet. In a three-letter angle name, the middle letter names the vertex.

WORKED EXAMPLE

Name the vertex of angle HIJ.

1. Look at the three letters: H, I, J.
2. In an angle name, the middle letter names the vertex.
3. The middle letter is I.

Answer: Vertex: I

PRACTICE 6 problems

- 1** Name the endpoints of segment AB.

ANSWER _____

- 2** Line CD goes forever in both directions. How many endpoints does it have?

ANSWER _____

- 3** Ray EF begins at E and passes through F. Name its endpoint.

ANSWER _____

- 4** Name the vertex of angle LMN.

ANSWER _____

- 5** A figure has 2 endpoints and no vertex. Is it a line, segment, ray, or angle?

ANSWER _____

- 6** A figure starts at P, passes through Q, and continues forever. Name the figure and its endpoint.

ANSWER _____

APPLY IT Show your work

- 1** In a game design club, Jordan marks a straight treasure path from point S to point T. The path stops at both points and does not continue. What figure represents the path, and what are its endpoints?

WORK SPACE

ANSWER _____

- 2** Two straight chalk paths meet at point V to make angle UVW. Which point is the vertex of the angle?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Sam says, "Every point named in a figure is either an endpoint or a vertex." Is Sam correct? Explain using line XY, segment QR, ray AB that starts at A and passes through B, and angle CDE.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Name the endpoints of segment AB.	A and B
2	Line CD goes forever in both directions. How many endpoints does it have?	0 endpoints
3	Ray EF begins at E and passes through F. Name its endpoint.	E
4	Name the vertex of angle LMN.	M
5	A figure has 2 endpoints and no vertex. Is it a line, segment, ray, or angle?	segment
6	A figure starts at P, passes through Q, and continues forever. Name the figure and its endpoint.	ray PQ; endpoint P

PART 2 • APPLY IT

1. **segment ST; endpoints S and T** A path that stops at two points is a segment. Its endpoints are the two stopping points, S and T.
2. **V** The vertex is where the two sides meet. It is also the middle letter in angle UVW.

CHALLENGE

No. Line XY has no endpoints or vertex. Segment QR has endpoints Q and R. Ray AB has endpoint A. Angle CDE has vertex D.

Accept "0," "zero," or "no endpoints" for the line question. For figure names, accept equivalent wording such as "a segment named ST" when the endpoints are correct.