Angle Detectives

Sort figures by what makes an angle.

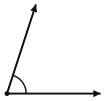
CCSS.Math.Content.4.MD.C.5 "Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:"

NAME _____ DATE _____

IS AN ANGLE

An angle is made by two rays that share one endpoint. The rays open away from that endpoint.

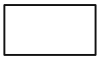
Two rays that meet at one endpoint



IS NOT AN ANGLE

A figure is not an angle if it does not show two rays sharing one endpoint.

A rectangle



1 SORT

8 items

Circle ANGLE or NOT ANGLE for each figure, then choose two figures and explain why you sorted each one.

1.

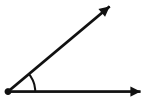


Figure 1

ANGLE NOT ANGLE

2.

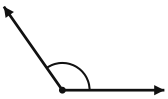


Figure 2

ANGLE NOT ANGLE

3.

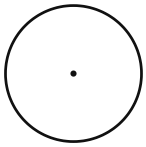


Figure 3

ANGLE NOT ANGLE

4.

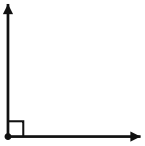


Figure 4

ANGLE NOT ANGLE

5.

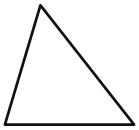


Figure 5

ANGLE NOT ANGLE

6.

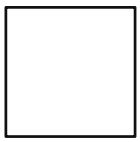


Figure 6

ANGLE NOT ANGLE

7.



Figure 7

ANGLE NOT ANGLE

8.

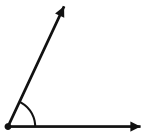


Figure 8

ANGLE NOT ANGLE

2 PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Draw one new example of an ANGLE and one new example of a NOT ANGLE.

ANGLE

NOT ANGLE

CHALLENGE

Draw three rays that share one endpoint, then circle two rays that make an angle.

ANSWER KEY # Angle Detectives

GRADE 4 · 4.MD.C.5

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (angle 40°)	**ANGLE**	The figure shows two rays sharing one endpoint.
2	Figure 2 (angle 125°)	**ANGLE**	The figure shows two rays sharing one endpoint.
3	Figure 3 (circle)	**NOT ANGLE**	A circle does not show two rays sharing an endpoint.
4	Figure 4 (angle 90°)	**ANGLE**	The figure shows two rays sharing one endpoint.
5	Figure 5 (triangle)	**NOT ANGLE**	The whole figure is a closed shape with line segments, not two rays.
6	Figure 6 (square)	**NOT ANGLE**	The whole figure is a closed shape with line segments, not two rays.
7	Figure 7 (angle 170°)	**ANGLE**	The figure shows two rays sharing one endpoint.
8	Figure 8 (angle 65°)	**ANGLE**	The figure shows two rays sharing one endpoint.

PART 2 · PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **ANGLE**: A drawing of two rays that share endpoint P.
- **NOT ANGLE**: A drawing of a circle.

Challenge: Draw three rays PA, PB, and PC that share endpoint P. Circle PA and PB, which form an angle.

For Part 2, accept explanations that identify two rays and their shared endpoint for an angle. For a NOT ANGLE figure, students may explain that it does not show two rays sharing one endpoint.