

Angle Detectives

Sort figures by what makes an angle.

NY-4.MD.5 "Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement."

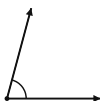
NAME _____

DATE _____

AN ANGLE

An angle is made by two rays that share one endpoint. The rays are straight and spread apart from the endpoint.

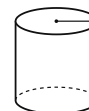
Two rays meet at one endpoint and open to make a 75° angle.



NOT AN ANGLE

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

A cylinder is not an angle.



1 SORT

8 items

For each figure, circle ANGLE or NOT ANGLE, then choose two figures and explain how their lines or curves show why each belongs.

1.

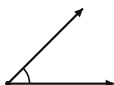


Figure 1

ANGLE

NOT ANGLE

2.



Figure 2

ANGLE

NOT ANGLE

3.

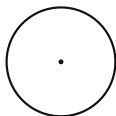


Figure 3

ANGLE

NOT ANGLE

4.

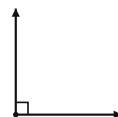


Figure 4

ANGLE

NOT ANGLE

5.



Figure 5

ANGLE

NOT ANGLE

6.

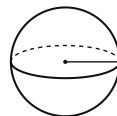


Figure 6

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

Write one new example of an angle and one new example that is not an angle.

ANGLE

NOT ANGLE

CHALLENGE

Draw an angle, label its common endpoint E, and trace each ray in a different color.

PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (angle 45°)	ANGLE	The figure shows two straight rays sharing one endpoint.
2	Figure 2 (angle 120°)	ANGLE	The figure shows two straight rays sharing one endpoint.
3	Figure 3 (circle)	NOT ANGLE	A circle is curved and does not show two straight rays with one shared endpoint.
4	Figure 4 (angle 90°)	ANGLE	The figure shows two straight rays sharing one endpoint.
5	Figure 5 (semicircle)	NOT ANGLE	A semicircle has a curved edge, not two straight rays sharing one endpoint.
6	Figure 6 (sphere)	NOT ANGLE	A sphere is a solid figure, not two rays sharing one endpoint.
7	Figure 7 (angle 30°)	ANGLE	The figure shows two straight rays sharing one endpoint.
8	Figure 8 (angle 160°)	ANGLE	The figure shows two straight 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:** Two straight rays that share endpoint P.
- **NOT ANGLE:** Not an angle: One single ray.

Challenge: A drawing with endpoint E, one ray going up from E and one ray going right from E, with the two rays in different colors.

For Part 2, accept explanations that identify two straight rays and one shared endpoint for ANGLE figures. For NOT ANGLE figures, students may explain that the figure has a curve, is a solid, or does not have two straight rays meeting at one endpoint.