Angle Detectives

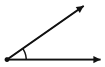
Sort angles by the size of their openings.

MA.4.GR.1 "Draw, classify and measure angles."

NAME _____ DATE _____

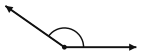
ACUTE ANGLE

An acute angle measures more than 0° and less than 90°. Its opening is smaller than a square corner.

Example angle 

OBTUSE ANGLE

An obtuse angle measures more than 90° and less than 180°. Its opening is wider than a square corner.

Example angle 

1 SORT

8 items

Circle ACUTE or OBTUSE for each figure, then choose two figures and explain how you knew their categories.

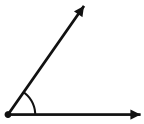
1. 

Figure 1

ACUTE OBTUSE

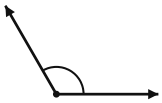
2. 

Figure 2

ACUTE OBTUSE

3. 

Figure 3

ACUTE OBTUSE

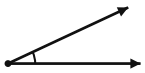
4. 

Figure 4

ACUTE OBTUSE

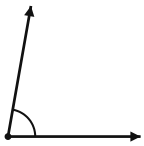
5. 

Figure 5

ACUTE OBTUSE

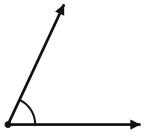
6. 

Figure 6

ACUTE OBTUSE

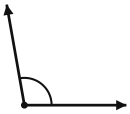
7. 

Figure 7

ACUTE OBTUSE

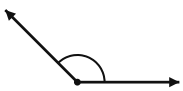
8. 

Figure 8

ACUTE OBTUSE

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 and label one new acute angle and one new obtuse angle.

ACUTE

OBTUSE

CHALLENGE

Draw an angle that is not acute or obtuse, measure it, and write its name.

ANSWER KEY # Angle Detectives

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (angle 55°)	**ACUTE**	55° is less than 90°, so it is acute.
2	Figure 2 (angle 120°)	**OBTUSE**	120° is greater than 90° and less than 180°, so it is obtuse.
3	Figure 3 (angle 155°)	**OBTUSE**	155° is greater than 90° and less than 180°, so it is obtuse.
4	Figure 4 (angle 25°)	**ACUTE**	25° is less than 90°, so it is acute.
5	Figure 5 (angle 80°)	**ACUTE**	80° is less than 90°, so it is acute.
6	Figure 6 (angle 65°)	**ACUTE**	65° is less than 90°, so it is acute.
7	Figure 7 (angle 100°)	**OBTUSE**	100° is greater than 90° and less than 180°, so it is obtuse.
8	Figure 8 (angle 135°)	**OBTUSE**	135° is greater than 90° and less than 180°, so it is obtuse.

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)

- **ACUTE**: An acute angle measuring 70°.
- **OBTUSE**: An obtuse angle measuring 110°.

Challenge: A 90° angle is a right angle.

For Part 2, accept explanations that compare the opening to a 90° square corner or use a correct measurement. Part 3 drawings may vary if each angle fits its labeled category.