

Angle Detectives

Sort angles by how wide they open.

CCSS.Math.Content.4.G.A.1 "Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures."

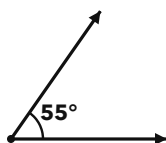
NAME _____

DATE _____

ACUTE ANGLE

An acute angle is smaller than a right angle. Its opening is less than 90° .

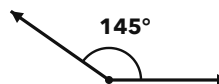
A 55° angle.



OBTUSE ANGLE

An obtuse angle is larger than a right angle but smaller than a straight angle. Its opening is more than 90° and less than 180° .

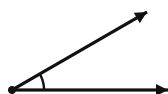
A 145° angle.



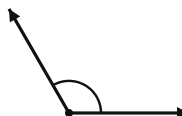
1 SORT _____ 8 items

Circle ACUTE or OBTUSE for each figure, then choose two figures and explain how you knew where each one belongs.

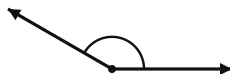
1. Figure 1 **ACUTE** **OBTUSE**



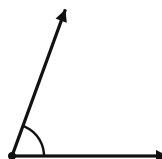
2. Figure 2 **ACUTE** **OBTUSE**



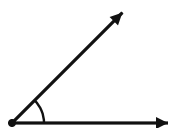
3. Figure 3 **ACUTE** **OBTUSE**



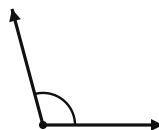
4. Figure 4 **ACUTE** **OBTUSE**



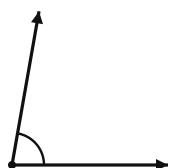
5. Figure 5 **ACUTE** **OBTUSE**



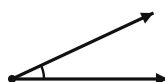
6. Figure 6 **ACUTE** **OBTUSE**



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

ACUTE

OBTUSE

OBTUSE

CHALLENGE

Draw an acute angle and an obtuse angle that share one vertex, then label both angles.



PART 1 • SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (angle 30°)	ACUTE	The angle measures 30° , which is less than 90° .
2	Figure 2 (angle 120°)	OBTUSE	The angle measures 120° , which is greater than 90° and less than 180° .
3	Figure 3 (angle 150°)	OBTUSE	The angle measures 150° , which is greater than 90° and less than 180° .
4	Figure 4 (angle 70°)	ACUTE	The angle measures 70° , which is less than 90° .
5	Figure 5 (angle 45°)	ACUTE	The angle measures 45° , which is less than 90° .
6	Figure 6 (angle 105°)	OBTUSE	The angle measures 105° , which is greater than 90° and less than 180° .
7	Figure 7 (angle 80°)	ACUTE	The angle measures 80° , which is less than 90° .
8	Figure 8 (angle 25°)	ACUTE	The angle measures 25° , which is less than 90° .

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:** Draw a 35° angle and label it acute.
- **OBTUSE:** Draw a 125° angle and label it obtuse.

Challenge: Draw a 40° angle and a 130° angle that share one vertex. Label the 40° angle acute and the 130° angle obtuse.

Accept any correctly drawn and labeled acute angle measuring more than 0° and less than 90° , and any correctly drawn and labeled obtuse angle measuring more than 90° and less than 180° . In Part 2, students should compare each chosen angle to a right angle.