

Angle Detectives

Identify acute, right, obtuse, straight and reflex angles.

GRADE 4 • MA.4.GR.1.1

MA.4.GR.1.1 "Informally explore angles as an attribute of two-dimensional figures. Identify and classify angles as acute, right, obtuse, straight or reflex."

NAME _____

DATE _____

READ, REASON AND EXPLAIN

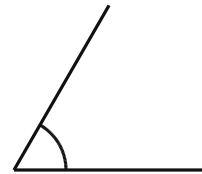
Follow the marked arc to decide which opening to classify. Acute: less than 90 degrees. Right: exactly 90 degrees, a square corner. Obtuse: greater than 90 and less than 180 degrees. Straight: exactly 180 degrees, a half-turn. Reflex: greater than 180 and less than 360 degrees.

WORKED EXAMPLE

Classify the marked angle by comparing its opening with a square corner.

1. A square corner is 90 degrees.
2. This marked opening is smaller than a square corner.

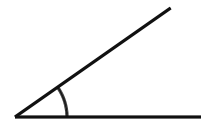
Answer: Acute.



PRACTICE 4 problems

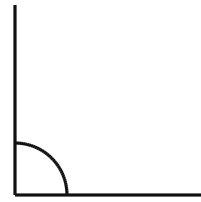
- 1** Classify the marked opening. Explain using a square corner.

ANSWER _____



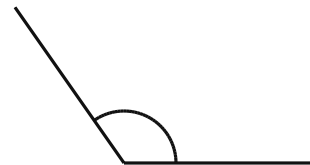
- 2** Classify the marked opening. How does it compare with a square corner?

ANSWER _____



- 3** Classify the marked opening. Compare it with 90 degrees and a straight angle.

ANSWER _____



- 4** Classify the marked half-turn. What is its benchmark measure?

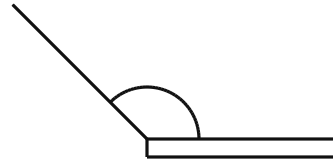
ANSWER _____



APPLY IT Show your work

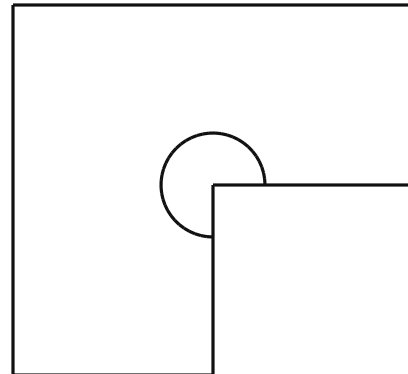
This is a side-view drawing of an open laptop.

- 1** Classify the marked angle between the screen and base. Explain.



Look at the marked interior angle at the inward corner of this L-shaped tile. Classify the larger opening traced by the arc.

- 2**



CHALLENGE One step up

Draw a reflex angle in the blank space. Mark its larger opening with an arc. Explain why it is neither obtuse nor straight.

WORK SPACE AND ANSWER

Use a paper corner to compare with a right angle. Exact protractor measurements are not required. The L-shaped tile has a marked 270-degree reflex interior angle at its inward corner; the small missing quarter is not the requested angle. For the drawing, require an arc that clearly selects the larger turn. Accept reasonable hand-drawn figures.

PRACTICE 1

Acute; smaller than 90 degrees.

PRACTICE 2

Right; exactly a square corner, 90 degrees.

PRACTICE 3

Obtuse; greater than 90 degrees and less than 180 degrees.

PRACTICE 4

Straight; 180 degrees.

APPLY IT 1

Obtuse; the marked angle is greater than a square corner and less than a half-turn.
Compare the opening between the screen and base with a paper square corner.

APPLY IT 2

Reflex; the marked turn is greater than 180 degrees and less than 360 degrees.
Follow the larger marked interior turn, not the small missing quarter.

CHALLENGE

Answers vary: the marked angle must be greater than 180 degrees and less than 360 degrees. An obtuse angle is below 180 degrees; a straight angle equals 180 degrees.

