Angle Tool Detectives

Look for the clue that tells which tools you need.

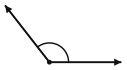
5.MG.3.e "Identify the appropriate tools (e.g., protractor, straightedge, angle ruler, available technology) to measure and draw angles."

NAME _____ DATE _____

MEASURE WITH ONE TOOL

An angle with no degree label needs to be measured. Use a protractor to find its angle measure.

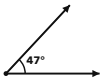
This angle has no degree label, so measure it with a protractor.



DRAW WITH TWO TOOLS

A degree label tells you the angle you need to draw. Use a straightedge to make the rays and a protractor to make the opening.

This degree label tells you to draw an angle using a straightedge and a protractor.



1 SORT

8 items

Circle ONE TOOL for an angle with no degree label or TWO TOOLS for an angle with a degree label, then choose two figures and explain how you knew.

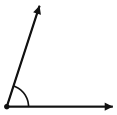
1. 

Figure 1

ONE TOOL | TWO TOOLS

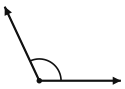
2. 

Figure 2

ONE TOOL | TWO TOOLS

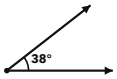
3. 

Figure 3

ONE TOOL | TWO TOOLS

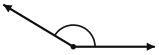
4. 

Figure 4

ONE TOOL | TWO TOOLS

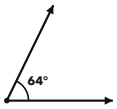
5. 

Figure 5

ONE TOOL | TWO TOOLS

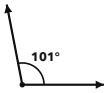
6. 

Figure 6

ONE TOOL | TWO TOOLS

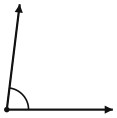
7. 

Figure 7

ONE TOOL | TWO TOOLS

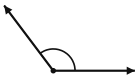
8. 

Figure 8

ONE TOOL | TWO TOOLS

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

Make one new example for each category. For ONE TOOL, sketch an angle with no degree label. For TWO TOOLS, write a degree measure and sketch that angle.

ONE TOOL

TWO TOOLS

CHALLENGE

Use a straightedge and protractor to draw a 135° angle, then draw a different angle with no degree label for a partner to measure.

ANSWER KEY

Angle Tool Detectives

GRADE 5 · 5.MG.3.e

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (angle 72°)	**ONE TOOL**	The angle has no degree label, so a protractor is needed to measure it.
2	Figure 2 (angle 115°)	**ONE TOOL**	The angle has no degree label, so a protractor is needed to measure it.
3	Figure 3 (angle 38°)	**TWO TOOLS**	The degree label gives an angle to draw, using a straightedge and protractor.
4	Figure 4 (angle 149°)	**ONE TOOL**	The angle has no degree label, so a protractor is needed to measure it.
5	Figure 5 (angle 64°)	**TWO TOOLS**	The degree label gives an angle to draw, using a straightedge and protractor.
6	Figure 6 (angle 101°)	**TWO TOOLS**	The degree label gives an angle to draw, using a straightedge and protractor.
7	Figure 7 (angle 83°)	**ONE TOOL**	The angle has no degree label, so a protractor is needed to measure it.
8	Figure 8 (angle 127°)	**ONE TOOL**	The angle has no degree label, so a protractor is needed to measure it.

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)

- **ONE TOOL**: A sketch of a 56° angle with no degree label.
- **TWO TOOLS**: Write 132° and sketch an angle that opens 132°.

Challenge: A 135° angle labeled 135°, plus a separate 69° angle with no degree label.

ONE TOOL: 1, 2, 4, 7, 8. TWO TOOLS: 3, 5, 6. In Part 2, students should identify the presence or absence of a degree label and name the needed tool or tools.