

Angle Reading Lab

Use a protractor scale to measure each angle.

GRADE 7 • 7.GSR.5.2

7.GSR.5.2 "Measure angles in whole number degrees using a protractor."

NAME _____

DATE _____

READ THE CORRECT SCALE

Place the protractor's center mark on the angle's vertex. Line up one ray with 0, then read the scale that starts at 0 on that ray. The number where the other ray crosses is the angle measure.

WORKED EXAMPLE

A protractor is centered on an angle. One ray lines up with 0 on the left, and the other ray crosses the scale at 67. What is the angle measure?

1. Put the center mark on the vertex.
2. Use the scale that begins with 0 on the left.
3. Read the tick where the second ray crosses: 67.

Answer: 67 degrees

PRACTICE 6 problems

- 1** One ray of an angle lines up with 0 on the right side of a protractor. The other ray crosses the scale that starts at 0 on the right at 25. Measure the angle.

ANSWER _____

- 2** One ray lines up with 0 on the left side of a protractor. The other ray crosses the scale that starts at 0 on the left at 142. Measure the angle.

ANSWER _____

- 3** An angle's rays line up with the two opposite 0 marks on a protractor. Measure the angle.

ANSWER _____

- 4** One ray lines up with 0 on the right. The other ray crosses the scale that starts at 0 on the right at 118. Measure the angle.

ANSWER _____

- 5** One ray lines up with 0 on the left. The other ray crosses the scale that starts at 0 on the left at 36. Measure the angle.

ANSWER _____

- 6** One ray lines up with 0 on the right. The other ray crosses the scale that starts at 0 on the right at 154. Measure the angle.

ANSWER _____

APPLY IT Show your work

- 1** For a skateboarding video, Jada uses a protractor to measure the angle between the flat ground and a ramp. The ground ray lines up with 0 on the left, and the ramp ray crosses the scale that starts at 0 on the left at 72. What is the ramp angle?

WORK SPACE

ANSWER _____

- 2** In robotics club, Mateo measures the turn between a robot's starting path and its new path. The starting path lines up with 0 on the right, and the new path crosses the scale that starts at 0 on the right at 135. What is the turn angle?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A protractor is centered on an angle. The baseline ray points right. At the other ray, one scale reads 47 and the other scale reads 133. What is the angle measure? Explain which number you used.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	One ray of an angle lines up with 0 on the right side of a protractor. The other ray crosses the scale that starts at 0 on the right at 25. Measure the angle.	25 degrees
2	One ray lines up with 0 on the left side of a protractor. The other ray crosses the scale that starts at 0 on the left at 142. Measure the angle.	142 degrees
3	An angle's rays line up with the two opposite 0 marks on a protractor. Measure the angle.	180 degrees
4	One ray lines up with 0 on the right. The other ray crosses the scale that starts at 0 on the right at 118. Measure the angle.	118 degrees
5	One ray lines up with 0 on the left. The other ray crosses the scale that starts at 0 on the left at 36. Measure the angle.	36 degrees
6	One ray lines up with 0 on the right. The other ray crosses the scale that starts at 0 on the right at 154. Measure the angle.	154 degrees

PART 2 • APPLY IT

- 72 degrees** Use the scale that begins at 0 on the ground ray. The ramp ray crosses at 72, so the angle measures 72 degrees.
- 135 degrees** Read the scale that starts at 0 on the robot's starting path. The new path crosses at 135, so the turn angle is 135 degrees.

CHALLENGE

47 degrees. The baseline points right, so use the scale that begins at 0 on the right.

Accept answers written with a degree symbol instead of the word degrees. For the challenge, accept any explanation that correctly identifies the scale beginning at 0 on the right.