

Angle Detective

Measure each opening to the nearest degree.

GRADE 4 • TEKS 4.7.C

4.7.C "determine the approximate measures of angles in degrees to the nearest whole number using a protractor;"

NAME _____

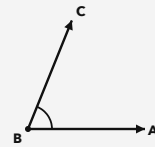
DATE _____

READ THE RIGHT SCALE

Put the protractor's center mark on the vertex. Line up 0 with one ray, read the scale at the other ray, then round to the nearest whole degree.

WORKED EXAMPLE

Use a protractor to measure angle ABC.

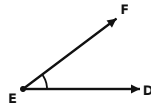


1. Put the center mark on B.
2. Line up 0 with ray BA.
3. Read 68° where ray BC crosses.
4. 68° is already a whole degree.

Answer: 68°

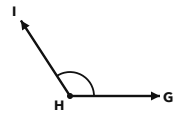
PRACTICE 4 problems

- 1** Use a protractor to measure angle DEF.



ANSWER _____

- 2** Use a protractor to measure angle GHI.



ANSWER _____

- 3** A ray crosses halfway between the 84° and 85° marks on your protractor. What is the angle measure to the nearest whole degree?

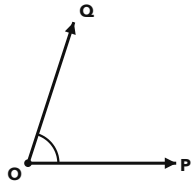
ANSWER _____

- 4** A ray crosses the 156° tick on your protractor. What is the angle measure to the nearest whole degree?

ANSWER _____

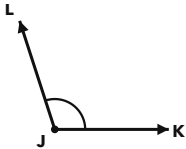
APPLY IT Show your work

- 1** At robotics club, a robot claw opens to the angle shown. Measure the opening angle with a protractor.



ANSWER _____

- 2** A player opens a handheld game device to the angle shown. Measure the hinge angle with a protractor.



ANSWER _____

CHALLENGE One step up

Jay starts at 0° on the left side of a protractor. The other ray crosses 38° on the opposite scale. Jay says the angle is 38° . What is the correct measure? Explain.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Use a protractor to measure angle DEF.	37°
2	Use a protractor to measure angle GHI.	123°
3	A ray crosses halfway between the 84° and 85° marks on your protractor. What is the angle measure to the nearest whole degree?	85°
4	A ray crosses the 156° tick on your protractor. What is the angle measure to the nearest whole degree?	156°

PART 2 • APPLY IT

1. **72°** Place the protractor center on O and line up 0 with one ray. The other ray reads 72°.
2. **108°** Place the protractor center on J and read the scale that starts at 0 on one ray. The other ray reads 108°.

CHALLENGE

142°, because $180^\circ - 38^\circ = 142^\circ$.

Accept degree symbols or the word degrees. For the challenge, accept an explanation that the correct scale gives 142°.