LESSON MAKER PRO

Turn by Turn

Count one-degree angles to measure turns.

GRADE 4 · 4.MD.C.5b

CCSS.Math.Content.4.MD.C.5b "An angle that turns through n one-degree angles is said to have an angle measure of n degrees."

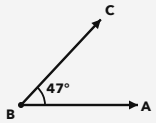
NAME _____ DATE _____

ONE DEGREE AT A TIME

A degree tells how far a ray turns. An angle that measures n degrees is made of n one-degree angles. You can count, add, or split one-degree angles to find an angle measure.

WORKED EXAMPLE

Look at the angle shown. How many one-degree angles are in this turn?

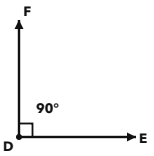


1. The angle label shows 47°.
2. Each degree is one one-degree angle.
3. The turn is made of 47 one-degree angles.

Answer: 47 one-degree angles

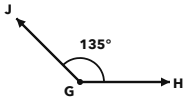
PRACTICE 6 problems

1 Look at the angle shown. How many one-degree angles are in this turn?



ANSWER _____

2 Look at the angle shown. What is its angle measure?



ANSWER _____

3 A turn passes through 72 one-degree angles. What is its angle measure?

ANSWER _____

4 An angle measures 180°. How many one-degree angles are in the angle?

ANSWER _____

5 A full turn measures 360°. How many one-degree angles are in a full turn?

ANSWER _____

6 A turn passes through 250 one-degree angles. What is its angle measure?

ANSWER _____

APPLY IT Show your work

1 In a dance video game, an avatar makes a 55° turn, then a 70° turn, then a 40° turn. How many one-degree angles does the avatar turn through altogether?

WORK SPACE

ANSWER _____

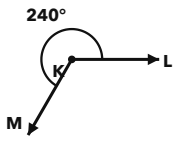
2 A toy robot makes 3 turns. Each turn measures 60°. How many one-degree angles does the robot turn through in all?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Look at the turn shown. A robot splits this total turn equally into 3 moves. How many one-degree angles are in each move? Explain your reasoning.



WORK SPACE AND ANSWER

ANSWER KEY

Turn by Turn

GRADE 4 · 4.MD.C.5b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Look at the angle shown. How many one-degree angles are in this turn?	**90 one-degree angles**
2	Look at the angle shown. What is its angle measure?	**135°**
3	A turn passes through 72 one-degree angles. What is its angle measure?	**72°**
4	An angle measures 180°. How many one-degree angles are in the angle?	**180 one-degree angles**
5	A full turn measures 360°. How many one-degree angles are in a full turn?	**360 one-degree angles**
6	A turn passes through 250 one-degree angles. What is its angle measure?	**250°**

PART 2 · APPLY IT

1. **165 one-degree angles** Add the three turns: 55 + 70 + 40 = 165. The avatar turns through 165 one-degree angles altogether.
2. **180 one-degree angles** Multiply the number of turns by the angle measure of each turn: 3 × 60 = 180. The robot turns through 180 one-degree angles.

CHALLENGE

80 one-degree angles in each move. 240 ÷ 3 = 80.

Accept answers written with either the degree symbol or the words one-degree angles when the value is correct. For the challenge, accept any clear explanation that divides 240 equally into 3 groups of 80.