LESSON MAKER PRO

Angle Piece Puzzle

Add and subtract angle parts to find missing measures.

GRADE 4 · 4.MD.C.7

CCSS.Math.Content.4.MD.C.7 "Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts..."

NAME _____ DATE _____

PUT THE PARTS TOGETHER

When an angle is split into parts that do not overlap, the measures of the parts add to make the whole angle. Add to find a whole angle. Subtract a known part from the whole to find a missing part.

WORKED EXAMPLE

A 137-degree angle is split into a 52-degree angle and x degrees. Find x.

1. 52 + x = 137
2. x = 137 - 52
3. x = 85

Answer: 85 degrees

PRACTICE 6 problems

1 An angle is split into parts measuring 28 degrees and 46 degrees. What is the measure of the whole angle?

ANSWER _____

2 A 120-degree angle is split into a 35-degree angle and x degrees. Find x.

ANSWER _____

3 An angle is split into three parts measuring 17 degrees, 39 degrees, and 24 degrees. What is the measure of the whole angle?

ANSWER _____

4 A 156-degree angle is split into a 71-degree angle and x degrees. Find x.

ANSWER _____

5 A right angle measures 90 degrees. It is split into a 58-degree angle and x degrees. Find x.

ANSWER _____

6 A straight angle measures 180 degrees. It is split into angles measuring 63 degrees, 48 degrees, and x degrees. Find x.

ANSWER _____

APPLY IT Show your work

1 At robotics club, a robot makes a 132-degree turn. The turn is split into a 47-degree turn and a second turn. What is the measure of the second turn?

WORK SPACE

ANSWER _____

2 A game designer makes a 110-degree corner turn for a race track. One part of the turn measures 64 degrees. What is the measure of the other part?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A straight angle measures 180 degrees. It is split into three non-overlapping parts. The first part measures 42 degrees. The second part measures 18 degrees more than the first part. The third part measures x degrees. Find x.

_____

_____

ANSWER KEY

Angle Piece Puzzle

GRADE 4 · 4.MD.C.7

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	An angle is split into parts measuring 28 degrees and 46 degrees. What is the measure of the whole angle?	**74 degrees**
2	A 120-degree angle is split into a 35-degree angle and x degrees. Find x.	**85 degrees**
3	An angle is split into three parts measuring 17 degrees, 39 degrees, and 24 degrees. What is the measure of the whole angle?	**80 degrees**
4	A 156-degree angle is split into a 71-degree angle and x degrees. Find x.	**85 degrees**
5	A right angle measures 90 degrees. It is split into a 58-degree angle and x degrees. Find x.	**32 degrees**
6	A straight angle measures 180 degrees. It is split into angles measuring 63 degrees, 48 degrees, and x degrees. Find x.	**69 degrees**

PART 2 · APPLY IT

1. **85 degrees** Subtract the known part from the whole turn: 132 - 47 = 85.
2. **46 degrees** Subtract the known angle from the whole angle: 110 - 64 = 46.

CHALLENGE

78 degrees

Accept answers written with the degree symbol or the word degrees. For the challenge, the second angle is 60 degrees, so x = 180 - 42 - 60 = 78 degrees.