LESSON MAKER PRO

Angle Pieces

Use smaller angles to find a whole angle or a missing part.

GRADE 4 · 4.M.B.26

4.M.B.26 "Decompose an angle into non-overlapping parts to demonstrate that the angle measure of the whole is the sum of the angle measures of the parts. a..."

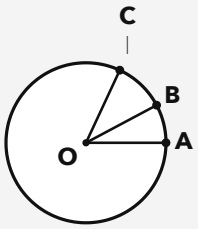
NAME _____ DATE _____

PARTS MAKE A WHOLE

When rays divide an angle into parts that do not overlap, add the parts to find the whole angle. If you know the whole angle, subtract a known part to find a missing part.

WORKED EXAMPLE

Use the rays in the figure. ∠AOB is 28° and ∠BOC is 37°. Find ∠AOC.

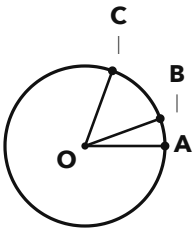


1. ∠AOB and ∠BOC are the two parts of ∠AOC.
2. Add the parts: 28° + 37° = 65°.

Answer: 65°

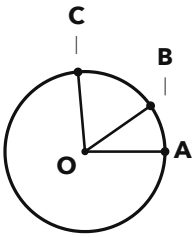
PRACTICE 6 problems

1 In the figure, ∠AOB is 20° and ∠BOC is 50°. Find ∠AOC.



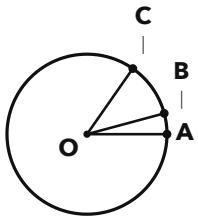
ANSWER _____

2 In the figure, ∠AOC is 95° and ∠AOB is 35°. Find ∠BOC.



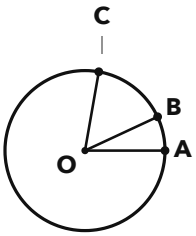
ANSWER _____

3 In the figure, ∠AOB is 15° and ∠BOC is 40°. Find ∠AOC.



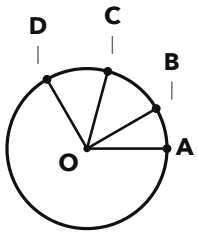
ANSWER _____

4 In the figure, ∠AOC is 80° and ∠BOC is 55°. Find ∠AOB.



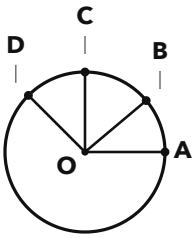
ANSWER _____

5 In the figure, ∠AOB is 30°, ∠BOC is 45°, and ∠COD is 45°. Find ∠AOD.



ANSWER _____

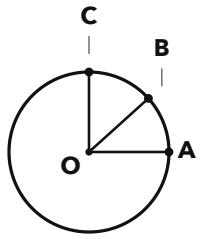
6 In the figure, ∠AOD is 135°, ∠AOB is 40°, and ∠BOC is 50°. Find ∠COD.



ANSWER _____

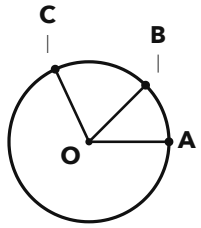
APPLY IT Show your work

1 Maya designs a spinner with sections marked by the rays in the figure. ∠AOB is 42° and ∠BOC is 48°. What is ∠AOC?



ANSWER _____

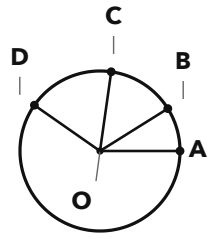
2 Leo divides a round club badge into sections using the rays in the figure. ∠AOC is 115° and ∠AOB is 45°. What is ∠BOC?



ANSWER _____

CHALLENGE One step up

In the figure, ∠AOD is 145°, ∠AOB is 32°, and ∠COD is 63°. Find ∠BOC. Show how you know.



WORK SPACE AND ANSWER

ANSWER KEY

Angle Pieces

GRADE 4 · 4.M.B.26

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	In the figure, ∠AOB is 20° and ∠BOC is 50°. Find ∠AOC.	**70°**
2	In the figure, ∠AOC is 95° and ∠AOB is 35°. Find ∠BOC.	**60°**
3	In the figure, ∠AOB is 15° and ∠BOC is 40°. Find ∠AOC.	**55°**
4	In the figure, ∠AOC is 80° and ∠BOC is 55°. Find ∠AOB.	**25°**
5	In the figure, ∠AOB is 30°, ∠BOC is 45°, and ∠COD is 45°. Find ∠AOD.	**120°**
6	In the figure, ∠AOD is 135°, ∠AOB is 40°, and ∠BOC is 50°. Find ∠COD.	**45°**

PART 2 · APPLY IT

1. **90°** Add the two sections: 42° + 48° = 90°.
2. **70°** Subtract the known section from the whole angle: 115° - 45° = 70°.

CHALLENGE

50°. The two known parts total 32° + 63° = 95°. The missing part is 145° - 95° = 50°.

Accept addition or subtraction equations that correctly combine the non-overlapping parts. For the challenge, accept 145° - 32° - 63° = 50°.