

Angle Number Hunt

Find missing angle measures with equations.

GRADE 4 • MA.4.GR.1.3

MA.4.GR.1.3 "Solve real-world and mathematical problems involving unknown whole-number angle measures. Write an equation to represent the unknown."

NAME _____

DATE _____

ANGLE TOTALS

Angles on a straight line total 180 degrees. Angles around one point total 360 degrees, and angles that fill a right angle total 90 degrees. Add the known measures, then subtract from the total to find the missing measure.

WORKED EXAMPLE

A right angle is split into two angles. One angle measures 34 degrees. What is the other angle measure?

1. A right angle totals 90 degrees.
2. Write an equation: $34 + \underline{\hspace{1cm}} = 90$.
3. Subtract 34 from 90: $\underline{\hspace{1cm}} = 56$.

Answer: 56 degrees

PRACTICE 6 problems

- 1** Two adjacent angles form a straight line. One angle measures 68 degrees. Write an equation and find the other angle measure.

ANSWER _____

- 2** Three angles meet at one point. Two angles measure 95 degrees and 140 degrees. Write an equation and find the third angle measure.

ANSWER _____

- 3** A right angle is split into two angles. One angle measures 37 degrees. Write an equation and find the other angle measure.

ANSWER _____

- 4** Four angles meet at one point. Three angles measure 110 degrees, 80 degrees, and 70 degrees. Write an equation and find the fourth angle measure.

ANSWER _____

- 5** Three adjacent angles form a straight line. Two angles measure 44 degrees and 59 degrees. Write an equation and find the missing angle measure.

ANSWER _____

- 6** Four angles meet at one point. Three angles measure 125 degrees, 90 degrees, and 65 degrees. Write an equation and find the fourth angle measure.

ANSWER _____

APPLY IT Show your work

- 1** Jalen is making a pinwheel with four sections that meet in the center. Three section angles measure 86 degrees, 104 degrees, and 72 degrees. Write an equation and find the angle measure of the last section.

WORK SPACE

ANSWER _____

- 2** A robot follows a path that makes a straight line. Two turns along one side of the line measure 57 degrees and 48 degrees. Write an equation and find the measure of the missing turn.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Four angles meet at one point. Two angles each have the same unknown measure. The other two angles measure 84 degrees and 116 degrees. Write an equation using two blanks, then find the measure of each unknown angle.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Two adjacent angles form a straight line. One angle measures 68 degrees. Write an equation and find the other angle measure.	$68 + \underline{\hspace{1cm}} = 180$; $\underline{\hspace{1cm}} = 112$ degrees
2	Three angles meet at one point. Two angles measure 95 degrees and 140 degrees. Write an equation and find the third angle measure.	$95 + 140 + \underline{\hspace{1cm}} = 360$; $\underline{\hspace{1cm}} = 125$ degrees
3	A right angle is split into two angles. One angle measures 37 degrees. Write an equation and find the other angle measure.	$37 + \underline{\hspace{1cm}} = 90$; $\underline{\hspace{1cm}} = 53$ degrees
4	Four angles meet at one point. Three angles measure 110 degrees, 80 degrees, and 70 degrees. Write an equation and find the fourth angle measure.	$110 + 80 + 70 + \underline{\hspace{1cm}} = 360$; $\underline{\hspace{1cm}} = 100$ degrees
5	Three adjacent angles form a straight line. Two angles measure 44 degrees and 59 degrees. Write an equation and find the missing angle measure.	$44 + \underline{\hspace{1cm}} + 59 = 180$; $\underline{\hspace{1cm}} = 77$ degrees
6	Four angles meet at one point. Three angles measure 125 degrees, 90 degrees, and 65 degrees. Write an equation and find the fourth angle measure.	$125 + 90 + 65 + \underline{\hspace{1cm}} = 360$; $\underline{\hspace{1cm}} = 80$ degrees

PART 2 • APPLY IT

- $86 + 104 + 72 + \underline{\hspace{1cm}} = 360$; $\underline{\hspace{1cm}} = 98$ degrees Add the three known angles to get 262 degrees. Subtract 262 from 360 to get 98 degrees.
- $57 + \underline{\hspace{1cm}} + 48 = 180$; $\underline{\hspace{1cm}} = 75$ degrees Add 57 and 48 to get 105 degrees. Subtract 105 from 180 to get 75 degrees.

CHALLENGE

$84 + 116 + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 360$; each blank = 80 degrees

Accept equivalent equations that show the correct total and missing measure. Students may write degree or degrees with their final measure.