

Blank Number Detectives

Build equations to find hidden whole numbers.

GRADE 5 • MA.5.AR.2.4

MA.5.AR.2.4 "Given a mathematical or real-world context, write an equation involving any of the four operations to determine the unknown whole number with the unknown in any position."

NAME _____

DATE _____

FIND THE UNKNOWN

An equation shows that two amounts are equal. Use ____ for the unknown number, then use the opposite operation to find it. Check by putting your answer back into the equation.

WORKED EXAMPLE

A number divided by 4 is 9. Write an equation and solve.

1. Write: $___ / 4 = 9$.

2. Multiply 9 by 4.

3. $9 \times 4 = 36$.

Answer: $___ = 36$

PRACTICE 6 problems

- 1** Start with a number. Add 27. The sum is 65. Write an equation using ____, then solve.

ANSWER _____

- 2** Subtract a number from 84. The difference is 29. Write an equation using ____, then solve.

ANSWER _____

- 3** Subtract 18 from a number. The difference is 47. Write an equation using ____, then solve.

ANSWER _____

- 4** Seven equal groups have 56 items altogether. Write an equation using ____ for the number of items in each group, then solve.

ANSWER _____

- 5** A number divided by 6 is 12. Write an equation using ____, then solve.

ANSWER _____

- 6** Ninety-six divided by a number is 16. Write an equation using ____, then solve.

ANSWER _____

APPLY IT Show your work

- 1** The art club puts 135 beads equally into 5 supply cups. How many beads go in each cup? Write an equation using ____, then solve.

WORK SPACE

ANSWER _____

- 2** At a game arcade, Priya has 178 tickets. She needs 250 tickets to choose a prize. How many more tickets does she need? Write an equation using ____, then solve.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A coding club has 92 badges. It gives 14 badges to new members, then shares the rest equally among 6 teams. How many badges does each team receive? Write an equation using ____, then solve.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Start with a number. Add 27. The sum is 65. Write an equation using ___, then solve.	$\underline{\hspace{1cm}} + 27 = 65$; $\underline{\hspace{1cm}} = 38$
2	Subtract a number from 84. The difference is 29. Write an equation using ___, then solve.	$84 - \underline{\hspace{1cm}} = 29$; $\underline{\hspace{1cm}} = 55$
3	Subtract 18 from a number. The difference is 47. Write an equation using ___, then solve.	$\underline{\hspace{1cm}} - 18 = 47$; $\underline{\hspace{1cm}} = 65$
4	Seven equal groups have 56 items altogether. Write an equation using ___ for the number of items in each group, then solve.	$7 * \underline{\hspace{1cm}} = 56$; $\underline{\hspace{1cm}} = 8$
5	A number divided by 6 is 12. Write an equation using ___, then solve.	$\underline{\hspace{1cm}} / 6 = 12$; $\underline{\hspace{1cm}} = 72$
6	Ninety-six divided by a number is 16. Write an equation using ___, then solve.	$96 / \underline{\hspace{1cm}} = 16$; $\underline{\hspace{1cm}} = 6$

PART 2 • APPLY IT

1. $135 / 5 = \underline{\hspace{1cm}}$; $\underline{\hspace{1cm}} = 27$ Divide 135 by 5 to find the number of beads in one cup. Each cup gets 27 beads.

2. $178 + \underline{\hspace{1cm}} = 250$; $\underline{\hspace{1cm}} = 72$ Subtract 178 from 250 to find the missing number of tickets. Priya needs 72 more tickets.

CHALLENGE

$$6 * \underline{\hspace{1cm}} + 14 = 92; \underline{\hspace{1cm}} = 13$$

Accept equivalent equations that correctly show the situation and lead to the same whole-number answer. For the challenge, accept $92 - 14 = 6 * \underline{\hspace{1cm}}$ or an equivalent equation.