LESSON MAKER PRO

Mystery Factor Missions

Find missing factors in number sentences and stories.

GRADE 3 · 3.A.2

3.A.2 "Use number sentences involving multiplication and unknowns to represent and solve real-world and mathematical problems. Use number sense with the properties of addition, subtraction, and multiplication..."

NAME _____ DATE _____

FIND THE MISSING FACTOR

In a multiplication sentence, the missing number can be a factor. Divide the product by the factor you know to find it. You can switch the order of factors without changing the product.

WORKED EXAMPLE

Find the missing factor: 9 × ____ = 81

1. Divide the product by the known factor: 81 / 9 = 9.
2. Write 9 in the blank.
3. Check: 9 × 9 = 81.

Answer: 9

PRACTICE 6 problems

1 Find the missing factor: 3 × ___ = 24

ANSWER _____

2 Find the missing factor: ___ × 4 = 28

ANSWER _____

3 Find the missing factor: 6 × ___ = 36

ANSWER _____

4 Find the missing factor: ___ × 8 = 40

ANSWER _____

5 Find the missing factor: 7 × ___ = 56

ANSWER _____

6 Find the missing factor: 10 × ___ = 70

ANSWER _____

APPLY IT Show your work

1 At a school fair, 4 bags hold the same number of popcorn balls. There are 32 popcorn balls in all. How many are in each bag? Write a multiplication sentence with ___, then solve.

WORK SPACE

ANSWER _____

2 You put 35 stickers on 7 pages, with the same number on each page. How many stickers are on each page? Write a multiplication sentence with ___, then solve.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find the missing factor in ___ × 6 = 42. Write a story that matches the sentence. Then explain why 6 × ___ = 42 has the same missing factor.

WORK SPACE AND ANSWER

ANSWER KEY

Mystery Factor Missions

GRADE 3 · 3.A.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the missing factor: 3 × ___ = 24	**8**
2	Find the missing factor: ___ × 4 = 28	**7**
3	Find the missing factor: 6 × ___ = 36	**6**
4	Find the missing factor: ___ × 8 = 40	**5**
5	Find the missing factor: 7 × ___ = 56	**8**
6	Find the missing factor: 10 × ___ = 70	**7**

PART 2 · APPLY IT

1. **4 × ___ = 32; 8 popcorn balls in each bag** Divide 32 by 4 to find 8 popcorn balls per bag.
2. **7 × ___ = 35; 5 stickers on each page** Divide 35 by 7 to find 5 stickers per page.

CHALLENGE

The missing factor is 7. Seven friends each have 6 toy cars, so they have 42 toy cars in all. Both blanks are 7 because switching the order of the factors does not change the product.

Accept either factor order in the word problems if the sentence matches the story. For the challenge, accept any story with 7 equal groups of 6 and an explanation that switching factor order keeps the product the same.