LESSON MAKER PRO

Multiple Detectives

Check whether numbers make equal groups.

GRADE 3 · MA.3.AR.3.2

MA.3.AR.3.2 "Determine whether a whole number from 1 to 144 is a multiple of a given one-digit number."

NAME _____ DATE _____

CHECK FOR EQUAL GROUPS

A number is a multiple of a one-digit number if it can be divided into equal groups with none left over. You can use multiplication facts to check.

WORKED EXAMPLE

Is 96 a multiple of 8?

1. Think of a multiplication fact with 8.
2. 8 x 12 = 96.
3. The product is 96, so there is no remainder.

Answer: Yes, 96 is a multiple of 8.

PRACTICE 6 problems

1 Is 42 a multiple of 6?

ANSWER _____

2 Is 57 a multiple of 3?

ANSWER _____

3 Is 65 a multiple of 5?

ANSWER _____

4 Is 74 a multiple of 7?

ANSWER _____

5 Is 91 a multiple of 9?

ANSWER _____

6 Is 144 a multiple of 4?

ANSWER _____

APPLY IT Show your work

1 Maya has 63 animal stickers. She wants to put the same number of stickers into 7 folders. Is 63 a multiple of 7?

WORK SPACE

ANSWER _____

2 A game club has 52 cards. The club wants to make equal sets of 6 cards. Is 52 a multiple of 6?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Which number is a multiple of both 6 and 9: 45, 54, or 66? Explain your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY

Multiple Detectives

GRADE 3 · MA.3.AR.3.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Is 42 a multiple of 6?	**Yes**
2	Is 57 a multiple of 3?	**Yes**
3	Is 65 a multiple of 5?	**Yes**
4	Is 74 a multiple of 7?	**No**
5	Is 91 a multiple of 9?	**No**
6	Is 144 a multiple of 4?	**Yes**

PART 2 · APPLY IT

1. **Yes, 63 is a multiple of 7.** Maya can put 9 stickers in each folder. Since 7 x 9 = 63, the stickers can be split into equal groups with none left over.
2. **No, 52 is not a multiple of 6.** 6 x 8 = 48, and 4 cards would be left over. Therefore, 52 cannot make equal sets of 6.

CHALLENGE

54. It is a multiple of 6 because 6 x 9 = 54, and it is a multiple of 9 because 9 x 6 = 54.

Accept yes or no answers with correct multiplication facts or division reasoning. For the challenge, accept any clear explanation showing that 54 can be divided equally by both 6 and 9.