LESSON MAKER PRO

Factor and Match

Find common factors, common multiples, and useful factored sums.

GRADE 6 · 6.NS.B.4

CCSS.Math.Content.6.NS.B.4 "Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12..."

NAME _____ DATE _____

FIND THE CONNECTION

To find a GCF, list the factors of each number and choose the greatest factor they share. To find an LCM, list multiples of each number and choose the least multiple they share. To rewrite a sum, factor out the GCF by dividing each addend by it.

WORKED EXAMPLE

Express 42 + 30 as a multiple of a sum whose terms have no common factor.

1. Factors shared by 42 and 30 are 1, 2, 3, and 6.
2. The greatest common factor is 6.
3. Divide each addend by 6: 42/6 = 7 and 30/6 = 5.
4. Write 42 + 30 = 6(7 + 5).

Answer: 6(7 + 5)

PRACTICE 6 problems

1 Find the GCF of 48 and 72.

ANSWER _____

2 Find the LCM of 8 and 9.

ANSWER _____

3 Express 45 + 60 as a multiple of a sum whose terms have no common factor.

ANSWER _____

4 Find the GCF of 56 and 84.

ANSWER _____

5 Express 32 + 40 as a multiple of a sum whose terms have no common factor.

ANSWER _____

6 Find the LCM of 10 and 12.

ANSWER _____

APPLY IT Show your work

1 The art club has 64 stickers and 80 keychains for prize packs. They want to make the greatest number of identical packs with no items left over. How many packs can they make, and how many stickers and keychains will be in each pack?

WORK SPACE

ANSWER _____

2 Two online game events begin today. One event happens every 7 days, and the other happens every 11 days. In how many days will both events happen on the same day again?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Express 90 + 72 as a multiple of a sum whose terms have no common factor. Then explain why the number outside the parentheses is the greatest common factor.

WORK SPACE AND ANSWER

ANSWER KEY

Factor and Match

GRADE 6 · 6.NS.B.4

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the GCF of 48 and 72.	**24**
2	Find the LCM of 8 and 9.	**72**
3	Express 45 + 60 as a multiple of a sum whose terms have no common factor.	**15(3 + 4)**
4	Find the GCF of 56 and 84.	**28**
5	Express 32 + 40 as a multiple of a sum whose terms have no common factor.	**8(4 + 5)**
6	Find the LCM of 10 and 12.	**60**

PART 2 · APPLY IT

1. **16 packs, with 4 stickers and 5 keychains in each pack.** Find GCF(64, 80) = 16. Divide each item total by 16.
2. **77 days** Find LCM(7, 11) = 77, since 7 and 11 have no common factor other than 1.

CHALLENGE

90 + 72 = 18(5 + 4). The factors of 5 and 4 have no common factor other than 1, so 18 is the greatest common factor of 90 and 72.

Accept equivalent factored forms with the addends in either order, such as 15(4 + 3). For word problems, accept correct answers that clearly state both the number of groups and the items in each group.