LESSON MAKER PRO

Factor Finders

Find shared factors and the greatest one.

GRADE 4 · 4.CE.2.f

4.CE.2.f "Determine common factors and the greatest common factor of no more than three numbers."

NAME _____ DATE _____

FIND WHAT THEY SHARE

List the factors of each number. The factors that appear in every list are common factors, and the largest shared factor is the greatest common factor, or GCF.

WORKED EXAMPLE

Find the common factors and GCF of 16 and 24.

1. Factors of 16: 1, 2, 4, 8, 16.
2. Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24.
3. Common factors: 1, 2, 4, 8.
4. The greatest common factor is 8.

Answer: Common factors: 1, 2, 4, 8; GCF: 8

PRACTICE 6 problems

1 Find the common factors and GCF of 12 and 20.

ANSWER _____

2 Find the common factors and GCF of 14 and 35.

ANSWER _____

3 Find the common factors and GCF of 8, 28, and 36.

ANSWER _____

4 Find the common factors and GCF of 27 and 45.

ANSWER _____

5 Find the common factors and GCF of 22, 33, and 44.

ANSWER _____

6 Find the common factors and GCF of 25 and 40.

ANSWER _____

APPLY IT Show your work

1 A game club has 32 trading cards and 40 art cards. The club wants to make the greatest possible number of identical card packs, using all the cards. How many packs can the club make? How many trading cards and art cards will be in each pack?

WORK SPACE

ANSWER _____

2 A garden club has 18 sunflower seeds and 30 bean seeds. The club will put the seeds into the greatest possible number of identical starter cups, with no seeds left. How many cups can the club fill? How many of each kind of seed will be in each cup?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find all the common factors and the GCF of 42, 56, and 70. Explain how you know your GCF is the greatest.

WORK SPACE AND ANSWER

ANSWER KEY

Factor Finders

GRADE 4 · 4.CE.2.f

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the common factors and GCF of 12 and 20.	**Common factors: 1, 2, 4; GCF: 4**
2	Find the common factors and GCF of 14 and 35.	**Common factors: 1, 7; GCF: 7**
3	Find the common factors and GCF of 8, 28, and 36.	**Common factors: 1, 2, 4; GCF: 4**
4	Find the common factors and GCF of 27 and 45.	**Common factors: 1, 3, 9; GCF: 9**
5	Find the common factors and GCF of 22, 33, and 44.	**Common factors: 1, 11; GCF: 11**
6	Find the common factors and GCF of 25 and 40.	**Common factors: 1, 5; GCF: 5**

PART 2 · APPLY IT

1. **8 packs, with 4 trading cards and 5 art cards in each pack.** Find the GCF of 32 and 40, which is 8. Divide each number by 8 to find the cards in each pack.
2. **6 cups, with 3 sunflower seeds and 5 bean seeds in each cup.** Find the GCF of 18 and 30, which is 6. Divide each number by 6 to find the seeds in each cup.

CHALLENGE

Common factors: 1, 2, 7, 14; GCF: 14. It is the greatest because no common factor is larger than 14.

Accept common factors in any order if the complete set is correct and the GCF is identified correctly. For the word problems, accept equivalent wording that gives the correct number of equal groups and items in each group.