Name_____ Date_____ Period_____

LESSON 6-7 · SESSION 1 · PRACTICE · FORM A

Factors and Greatest Common Factor

Learning target – I can list the factors of two numbers and find their greatest common factor. · 6.NS.B.4

REMEMBER

- A **factor** divides a number with no remainder. A **common factor** divides both numbers.
- The **GCF** is the greatest factor two numbers share. Check it by dividing it into both.
- **Prime factorization**: split until every factor is prime: 63 = 7 × 3 × 3.

WORKED EXAMPLE

Find the GCF of 20 and 30.

Step 1 Factors of 20: 1, 2, 4, 5, 10, 20.

Step 2 Factors of 30: 1, 2, 3, 5, 6, 10, 15, 30.

Step 3 Shared factors: 1, 2, 5, 10. The greatest is 10.

Answer **GCF = 10**

WORDS **factor** *(factor)* · **greatest common factor** *(máximo común divisor)* · **prime factorization** *(factorización prima)*

PRACTICE

show your work · label units

1. Find the GCF of each pair.

a. 16 and 24 _____

b. 18 and 30 _____

c. 21 and 35 _____

d. 15 and 25 _____

2. **Factor Pairs.** Work with the number 45.

Hint *Start with 1 × 45, then try 2, 3, 4, 5, …*

a. List every factor pair of 45. _____

b. List all factors of 45 from least to greatest. _____

3. **Prime Factor Tree.** Build a factor tree for 42 in the box.

Hint *Split 42 into 6 × 7, then split 6.*

a. Prime factorization of 42: _____

b. Is 7 a factor of 42? _____

Show your work.

4. **Gift Bags.** A volunteer has 18 erasers and 27 stickers. Every bag must hold the same number of each, with nothing left over.

a. Greatest number of bags: _____

b. In one bag: erasers ___ stickers ___

Show your work.

5. **Pilar's Answer.** Pilar says the GCF of 15 and 25 is 3. Is she right? Give the correct GCF.

Hint *Does 3 divide 25 with no remainder?*

Show your work.

GCF_____

6. **Zola's Answer.** Zola says the GCF of 14 and 49 is 2. Is she right? Give the correct GCF.

Hint *List the factors of 49.*

Show your work.

GCF_____

7. **Garden Rows.** A gardener has 28 carrot seeds and 40 bean seeds. She plants identical rows with none left over.

a. Greatest number of rows: _____

b. In one row: carrot seeds ___ bean seeds ___

Show your work.

8. **Party Bags.** A host has 48 stickers and 60 erasers for identical bags with none left over.

a. Find the greatest number of bags. _____

b. How many of each item go in one bag? _____

c. Explain why 10 bags would not work. _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. **Farrah's Work.** Farrah said the GCF of 9 and 30 is 9, because 9 is a factor of 9. Explain her mistake. Then find the correct GCF.

TEST PRACTICE

choose the best answer

10. The GCF of 12 and 18 is –

A 3 **B** 6 **C** 36 **D** 2

11. A factor of a number divides it with –

A a remainder of 1 **B** a decimal answer **C** no remainder **D** a remainder of 2

SELF-CHECK CODE *find your answer · copy its letter into that problem's box · spell a math word*

9 A	6 X	12 R	3 Q	5 C	2 × 3 × 7 F	2 Z	7 T	4 O

#3a	#4a	#5	#6	#7a	#8a

CHECK YOURSELF	☐ I can do this on my own	☐ I need a little help	☐ I have a question about #___