ALBERT

Name _____ Date _____

Factors and Multiples Worksheet

Grade 4 · Common Core 4.OA.B.4

> Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

Practice

Builds the skill step by step.

1. List all the factors of 12 from least to greatest.

2. Is 7 prime or composite?

3. Is 15 a multiple of 5? Write yes or no.

4. Which number is a factor of 18?

   A. 4

   B. 5

   C. 6

   D. 7

5. List the first five multiples of 6.

6. Which number is prime?

   A. 9

   B. 11

   C. 15

   D. 21

7. List all the factors of 20 from least to greatest.

8. Is 24 prime or composite?

9. Which number is a multiple of 4?

   A. 14

   B. 22

   C. 28

   D. 30

10. How many factor pairs does 16 have?

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On Level

Grade-level practice.

1. List all the factors of 36 from least to greatest.

2. Which list shows all the factor pairs of 30?

   A. 1 × 30, 2 × 15, 3 × 10

   B. 2 × 15, 3 × 10, 5 × 6

   C. 1 × 30, 2 × 15, 3 × 10, 5 × 6

   D. 1 × 30, 2 × 15, 4 × 7, 5 × 6

3. Is 91 prime or composite?

4. Which number is a multiple of 7?

   A. 47

   B. 54

   C. 63

   D. 72

5. Is 84 a multiple of 6? Write yes or no.

6. List all the prime numbers between 20 and 40, from least to greatest.

7. Which statement is true?

   A. 9 is a multiple of 45.

   B. 45 is a factor of 9.

   C. 45 is a multiple of 9 because $9 \times 5 = 45$.

   D. 5 is a multiple of 45.

8. What is the greatest factor of 56 that is less than 56?

9. Which number has exactly 2 factors?

   A. 1

   B. 27

   C. 49

   D. 53

10. A teacher arranges 32 desks in equal rows. A row can have any number of desks from 1 to 32. List every possible number of desks in a row, from least to greatest.

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Challenge

Multi-step and word problems that stretch it.

1. Which whole number from 21 to 29 has the most factors?

2. I am a number less than 50. I am a multiple of 6 and a multiple of 8. I am greater than 30. What number am I?

3. Leo says, "Every odd number is prime." Which number shows that he is wrong?

   A. 3

   B. 7

   C. 13

   D. 21

4. List all the prime numbers less than 20, from least to greatest.

5. A number has exactly these factor pairs: 1 × 18, 2 × 9 and 3 × 6. What is the number, and is it prime or composite?

6. Ms. Park has 60 stickers to share equally with no stickers left over. Which number of students could NOT share them equally?

   A. 5

   B. 6

   C. 8

   D. 12

7. How many whole numbers from 1 to 100 are multiples of both 4 and 6?

8. Ana says, "If 8 is a factor of a number, then 4 is also a factor of that number." Is she right?

   A. Only when the number is less than 50.

   B. Yes. $8 = 4 \times 2$, so any multiple of 8 is also a multiple of 4.

   C. No. 32 is a multiple of 8 but not a multiple of 4.

   D. No. 4 is smaller than 8, so it cannot be a factor.

9. What is the smallest whole number greater than 1 that is a multiple of 2, 3 and 5?

10. A gardener plants 36 plants in equal rows to make a rectangle. There must be at least 2 rows and at least 2 plants in each row. How many different arrangements are possible? (4 rows of 9 and 9 rows of 4 count as different.)