Math 6 : Q1 HW 4

Factors of Whole Numbers

Name _____

Key Concept and Vocabulary

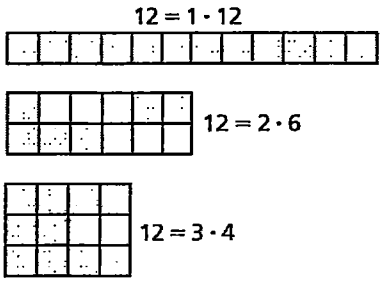
Factors of 12: 1, 2, 3, 4, 6, 12

Factors of 18: 1, 2, 3, 6, 9, 18

Greatest Common Factor

Visual Model

There are 3 ways to factor 12 into 2 whole numbers. Each way is represented by a rectangle.



Skill Examples

1. Factors of 1: 1
2. Factors of 8: 1, 2, 4, 8
3. Factors of 7: 1, 7
4. Factors of 30: 1, 2, 3, 5, 6, 10, 15, 30
5. Factors of 33: 1, 3, 11, 33

Application Example

6. What is the greatest number of people with whom 20 pennies and 24 dimes can be shared so that each person gets the same share?

   The greatest common factor (GCF) of 20 and 24 is 4.

   ∴ The greatest number is 4 people.

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Check your answers at BigIdeasMath.com.

List all factors of both numbers. Then circle the greatest common factor.

7. Factors of 6: _____
   Factors of 9: _____
8. Factors of 8: _____
   Factors of 16: _____
9. Factors of 20: _____
   Factors of 30: _____
10. Factors of 75: _____
    Factors of 100: _____
11. Factors of 34: _____
    Factors of 51: _____
12. Factors of 10: _____
    Factors of 18: _____
13. Sketch all possible ways that 16 small squares can be arranged to form a rectangle.

14. **SHARING COINS** What is the greatest number of people with whom 30 nickels and 36 dimes can be shared so that each person gets the same share? _____
15. **DECK OF CARDS** A deck of cards has 52 cards. The deck can be divided into 4 piles of exactly 13 cards each. Describe all the other ways the deck can be divided into equal piles.

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