

Reteaching 4-4

Greatest Common Factor

You can find the *greatest common factor (GCF)* of 12 and 18 using a division ladder, factor trees, or by listing the factors. Two of these methods are shown.

- ① List the factors of 12 and 18.

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

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

- ② Find the common factors.

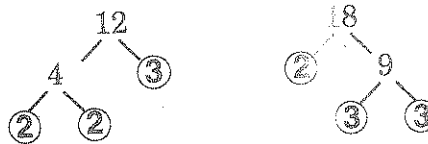
12: ①, ②, ③, 4 ⑥, 12

18: ①, ②, ③, ⑥, 9, 18

The common factors are 1, 2, 3, and 6.

- ③ Name the greatest common factor: 6.

- ① Draw factor trees.



- ② Write each prime factorization. Identify common factors.

$$12: ② \times 2 \times ③$$

$$18: ② \times ③ \times 3$$

- ③ Multiply the common factors. $2 \times 3 = 6$.
The GCF of 12 and 18 is 6.

List the factors to find the GCF of each set of numbers.

- | | | |
|--------------|--------------|--------------|
| 1. 10: _____ | 2. 14: _____ | 3. 9: _____ |
| 15: _____ | 21: _____ | 21: _____ |
| GCF: _____ | GCF: _____ | GCF: _____ |
| 4. 12: _____ | 5. 15: _____ | 6. 15: _____ |
| 13: _____ | 25: _____ | 18: _____ |
| GCF: _____ | GCF: _____ | GCF: _____ |
| 7. 36: _____ | 8. 24: _____ | |
| 48: _____ | 30: _____ | |
| GCF: _____ | GCF: _____ | |

Find the GCF of each set of numbers.

- | | |
|------------------|------------------|
| 9. 21, 60 _____ | 10. 15, 45 _____ |
| 11. 54, 60 _____ | 12. 20, 50 _____ |
| 13. 36, 40 _____ | 14. 48, 72 _____ |

Guided Problem Solving You want to make bouquets of balloons. You choose 18 yellow, 30 blue, and 42 red balloons. Each bouquet will have the same number of each color. What is the greatest possible number of bouquets you can make?