

Super Factors

Finding Factors

Sample

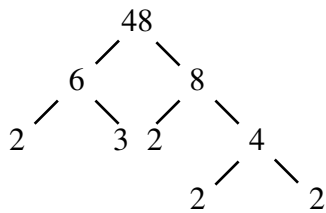
Find all the factors of 24. (1, 24) (2, 12) (3, 8) (4, 6) or (1, 2, 3, 4, 6, 8, 12, 24)

Directions: Study the Facts and Reminders page for this unit. Find all of the factors for each number listed below. Circle whether each number is *prime* or *composite*.

- | | |
|---|---|
| 1. 12
factors: _____
prime or composite | 2. 14
factors: _____
prime or composite |
| 3. 28
factors: _____
prime or composite | 4. 19
factors: _____
prime or composite |
| 5. 35
factors: _____
prime or composite | 6. 23
factors: _____
prime or composite |
| 7. 22
factors: _____
prime or composite | 8. 90
factors: _____
prime or composite |
| 9. 72
factors: _____
prime or composite | 10. 71
factors: _____
prime or composite |
| 11. 84
factors: _____
prime or composite | 12. 91
factors: _____
prime or composite |
| 13. 81
factors: _____
prime or composite | 14. 13
factors: _____
prime or composite |
| 15. 100
factors: _____
prime or composite | 16. 101
factors: _____
prime or composite |
| 17. 144
factors: _____
prime or composite | 18. 300
factors: _____
prime or composite |
| 19. 360
factors: _____
prime or composite | 20. 288
factors: _____
prime or composite |

Prime Factorization

Use a factor tree to find the prime factors of a number.



The prime factorization of 48 is $2 \times 3 \times 2 \times 2 \times 2$ or $2^4 \times 3$.

Directions: Carefully read the Facts and Reminders page for this unit. Use factor trees to find the prime factors of the numbers listed on this page. Use exponents to write the prime factorization of each number.

1. 18

prime factorization: _____

2. 24

prime factorization: _____

3. 36

prime factorization: _____

4. 28

prime factorization: _____

5. 60

prime factorization: _____

6. 72

prime factorization: _____

7. 144

prime factorization: _____

8. 108

prime factorization: _____

9. 432

prime factorization: _____

10. 999

prime factorization: _____

Super Factors

Literal and Numerical Factors

Directions: Study the Facts and Reminders page for this unit. Determine the literal factors and the numerical factors for each term listed below.

- | | |
|--|--|
| 1. $4xyz$
numerical factors: _____
literal factors: _____ | 2. $5(3ab)$
numerical factors: _____
literal factors: _____ |
| 3. $5a(4bc)$
numerical factors: _____
literal factors: _____ | 4. $9(xyz)$
numerical factors: _____
literal factors: _____ |
| 5. $(3ad)(4bc)$
numerical factors: _____
literal factors: _____ | 6. $(17n)(12p)$
numerical factors: _____
literal factors: _____ |
| 7. $12(13yz)$
numerical factors: _____
literal factors: _____ | 8. $3(2ab)(4xy)(5z)$
numerical factors: _____
literal factors: _____ |
| 9. $(x)(3y)(4z)$
numerical factors: _____
literal factors: _____ | 10. $4(5a)(3b)$
numerical factors: _____
literal factors: _____ |

Directions: Name the numerical and literal coefficients for each term listed below. The first one is done for you. (A coefficient may have several factors.)

- | | |
|---|--|
| 11. $4abc$
numerical coefficient: <u>4</u>
literal coefficient: <u><i>abc</i></u> | 12. $9xyz$
numerical coefficient: _____
literal coefficient: _____ |
| 13. $19xyz$
numerical coefficient: _____
literal coefficient: _____ | 14. $23abx$
numerical coefficient: _____
literal coefficient: _____ |
| 15. $26(ab)$
numerical coefficient: _____
literal coefficient: _____ | 16. $15(adn)$
numerical coefficient: _____
literal coefficient: _____ |
| 17. xy
numerical coefficient: _____
literal coefficient: _____ | 18. $(4)(abc)$
numerical coefficient: _____
literal coefficient: _____ |