

## Vocabulary: Factor Trees



### Vocabulary

- Composite number – a whole number that has factors other than just 1 and itself.
  - For example, 20 is a composite number. The factors of 20 are 1, 2, 4, 5, 10, and 20.
  - If a whole number is not a composite number or 1, it is a *prime number*.
- Divisible – able to be divided by a given whole number without a remainder.
  - For example, 20 is divisible by 4 because  $20 \div 4 = 5$ .
- Factor – a whole number that divides into another number without a remainder.
  - For example, 4 is one of the factors of 20, because  $20 \div 4 = 5$ .
  - You can also see that 4 is a factor of 20 because you can multiply 4 by a whole number to get 20 ( $4 \times 5 = 20$ ).
- Factor tree – a tree-like structure that uses branches to show the factors of a number.
  - For example, to the right is a factor tree for 20.
  - To show a complete prime factorization of a number, every branch of a factor tree should end with a prime number.
- Multiple – the product of a given number and another whole number.
  - For example, the multiples of 4 are 4, 8, 12, 16, 20, 24, and so on.
- Prime factorization – an expression that shows a number expressed as a product of prime numbers.
  - For example, the prime factorization of 20 is  $20 = 2 \times 2 \times 5$ .
  - Every composite number has only one unique prime factorization.
- Prime number – a whole number that has only two factors, 1 and itself.
  - For example, 11 is a prime number. The only factors of 11 are 1 and 11.
- Product – the answer to a multiplication problem.
  - For example, the *product* of 3 and 4 is 12 because  $3 \times 4 = 12$ .

