Check Up

1. What is prime factorization of the number 147? Explain your reasoning.

✓ Compare your answers.

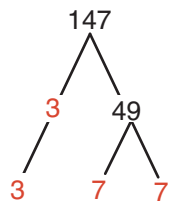1. What is prime factorization of the number 147? Explain your reasoning.

Since 147 is not divisible by 2, start by dividing it by the next smallest prime number, 3.

$147 \div 3 = 49$

But, 49 is not a prime number, so 49 must be further factored. The smallest prime factor of 49 is 7.

$49 \div 7 = 7$

The number 7 is a prime number, so 147 has been fully factored and can be written as follows:

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      147
      / \
     3   49
    /    / \
   3    7   7
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$147 = 3 \times 7 \times 7$