# **Fractions Comprehension Check**

1. Describe how to compare fractions with like numerators, such as and .
2. What are mixed fractional numbers and improper fractions? What is written as a mixed number? What is 3 written as an improper fraction?
3. What does equivalent mean? Find three fractions equivalent to .
4. Order the fractions from least to greatest using what you know about equivalence to help you: .

For questions 5-7, use what you know about fractions, decimals, and lowest terms to complete the table.

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| **Question #** | **Fraction** | **Decimal** | **Fraction in Lowest Terms** |
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1. Explain how you would solve the following problem. What is your final solution?

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1. According to the text, what procedures should you follow to divide a fraction by a whole number? Show your thinking to solve the following problem: .

1. Describe how multiplying a whole number by a fraction is similar to multiplying a fraction by a fraction. Use an example to support your answer.

# **Fractions Comprehension Check Answer Key**

1. Describe how to compare fractions with like numerators, such as and .
   1. It can often be helpful to use visual representations to compare fractions. However, we can use a strategy when both numerators are the same to efficiently find a solution. This strategy involves thinking about the size of the pieces, or the denominator. If we have the same number of pieces, we know the greater fraction will be the one with the largest pieces. In fractions, the smaller the digit in the denominator, the larger the pieces. We can say that when the numerators are the same, the greatest fraction has the smallest denominator.
   2. For example, when comparing and , we can look to the denominators. Because fifths are larger than ninths, we can say < .
2. What are mixed fractional numbers and improper fractions? What is written as a mixed number? What is 3 written as an improper fraction?
   1. Mixed fractional numbers are fractions greater than one whole and are written as a whole number and a fraction. written as a mixed number is 2 .
   2. Improper fractions are fractions greater than one and are written as a fraction in which the numerator is greater than the denominator. 3 written as an improper fraction is .
3. What does equivalent mean? Find three fractions equivalent to .
   1. In math, equivalent is used to describe two quantities that have the same value, even though they may be represented differently. For example, is equivalent to , and Note: students may list other equivalent fractions as well.
4. Order the fractions from least to greatest using what you know about equivalence to help you: .
   1. In order to compare and order these fractions, it is easiest to find equivalent fractions with common denominators, that is to rewrite them so they contain pieces that are the same size and are therefore easier to compare. 24 is a common denominator, so we will find equivalent fractions for and .
   2. and
   3. We can now order the fractions from least to greatest: , which is equivalent to .

For questions 5-7, use what you know about fractions, decimals, and lowest terms to complete the table.

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| **Question #** | **Fraction** | **Decimal** | **Fraction in Lowest Terms** |
|  |  | 0.4 |  |
|  |  | 0.5 |  |
|  |  | 0.75 |  |

1. Explain how you would solve the following problem. What is your final solution?

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* 1. To solve this problem, we should first identify common denominators and rewrite the problem using equivalent fractions. If needed, we can convert the mixed numbers into improper fractions to make regrouping easier. Finally, we can solve by subtracting, remembering to keep the denominators constant, or the same.
  2. 1 is equivalent to 1 and is equivalent to so we can rewrite the original problem as . Because 12 is greater than 7, we will need to regroup. The best strategy to use now is to write the problem with an improper fraction rather than a mixed number: .

1. According to the text, what procedures should you follow to divide a fraction by a whole number? Show your thinking to solve the following problem: .
   1. According to the text, when you divide a fraction by a whole number, you rewrite the problem as the fraction multiplied by the reciprocal of the whole number, or which is equivalent to .

1. Describe how multiplying a whole number by a fraction is similar to multiplying a fraction by a fraction. Use an example to support your answer.
   1. Multiplying a fraction by a whole number is quite similar to multiplying a fraction by a fraction, especially when you rewrite the whole number as a fraction. For example, the problem 3 x can be rewritten as and can then be solved as a fraction times a fraction problem. which can be written as an equivalent mixed number as .