EQUIVALENT FRACTIONS

What Are Equivalent Fractions?

- Equivalent fractions represent the same ratio between two values.
- Fractions show a ratio between two values. The fraction ½ represents 1 out of 2. If there were 2 students sharing an assignment, each would do part of the work. The work would be divided into 2 equal parts and each student would do 1 part or ½ the total project.
- The fraction ½ also represents part of a set. If there are 2 cookies in a set and one is eaten, then 1 out of 2 cookies is eaten. The relationship between the cookie eaten and the total number of cookies is 1 out of 2 or 1/2.
- Because sets come in a variety of sizes, fractional parts will have a
  variety
  s many
  equival

1	2	3	50	100
2	4	6	100	200

- The rati
  sult, all the
  fraction
- Any number times 1 equals itself. For example 1 x 4 = 4, 1 x 37 = 37, 1 x 576 = 576. Therefore, 1 x ½ = ½.
- Like ½, the number 1 has a multitude of equivalents: 2/2, 4/4, 10/10, 50/50. Whenever the numerator and denominator are the same numbers, the fraction is equivalent to one.

$$1 \times 5 = 5$$

$$3/3 \times \frac{1}{2} = 3/6$$

$$6/6 \times \frac{1}{2} = 6/12$$

How to calculate an equivalent fraction:

- To calculate an equivalent fraction, multiply the fraction by 1 or one of its equivalent fractions. Choose a number that when multiplied by the denominator will produce a sum that helps you solve a problem.
- For example:

$$1/5 = n/25$$

$$1/5 \times 5/5 = 5/25$$

$$n = 5$$

$$3/7 = n/21$$

- Calculat em in which
  the two r example:

$$2/5 + 7/15 =$$

$$(2/5 \times 3/3) + 7/15 =$$

$$6/15 + 7/15 = 13/15$$

- Changing the denominator of 2/5 to 15 allows us to add the two fractions. This is accomplished by multiply 2/5 x 1 which equals 2/5, but using 3/3 (an equivalent of 1). Any fraction can be changed to an equivalent by multiplying times a fraction equivalent to 1.

Try This!

1. What is an equivalent fraction for 4/5?

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2. What is the numerator for this equivalent fraction? **5 / 8 = n / 40**

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3. Are 15/20 and 30/40 equivalent fractions?

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4. What is **24 = n / 72**

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5. Are 5/10 and 25/55 equivalent fractions?

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