

Wednesday 20th May

WALT: Consolidate our knowledge of fractions, percentages and decimals

Let's revise some of the most important ideas to remember in order to get fraction questions correct.

Equivalent Fractions

Multiplying or dividing **both** the numerator and denominator of a fraction will result in an equivalent fraction. Here are some more examples:

$\frac{2}{3}$	Multiply top and bottom by 4	$\frac{2}{3} \times 4 = \frac{8}{12}$	$\frac{2}{3}$ are equivalent to $\frac{8}{12}$
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$\frac{5}{6}$	Multiply top and bottom by 3	$\frac{5}{6} \times 3 = \frac{15}{18}$	$\frac{5}{6}$ are equivalent to $\frac{15}{18}$
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$\frac{8}{10}$	Divide top and bottom by 2	$\frac{8}{10} \div 2 = \frac{4}{5}$	$\frac{8}{10}$ are equivalent to $\frac{4}{5}$
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$\frac{3}{4}$	Multiply top and bottom by 10	$\frac{3}{4} \times 10 = \frac{30}{40}$	$\frac{3}{4}$ are equivalent to $\frac{30}{40}$
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Now find the equivalent fraction for these:

Multiply or divide the numerator and denominator by the same number and then write the equivalent fraction (the first one is done for you).

$\frac{4}{6}$	$\frac{\div 2}{\div 2}$	=	$\frac{2}{3}$
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$\frac{1}{3}$	_____	=	$\frac{\quad}{15}$
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$\frac{2}{4}$	_____	=	$\frac{\quad}{2}$
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$\frac{1}{12}$	_____	=	$\frac{\quad}{48}$
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$\frac{4}{16}$	_____	=	$\frac{\quad}{4}$
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$\frac{2}{3}$	_____	=	$\frac{\quad}{30}$
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$\frac{15}{21}$	_____	=	$\frac{\quad}{7}$
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$\frac{25}{30}$	_____	=	$\frac{5}{\quad}$
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Adding and subtracting fractions

A common denominator must be found when adding or subtracting fractions that have different denominators. This is the most important (and probably the hardest) step in adding or subtracting fractions. A common denominator can always be found by multiplying the denominators.

6 is a common multiple of 2 and 3.

$$\frac{1}{2} + \frac{1}{3}$$

Change fraction #1 to an equivalent fraction with a denominator of 6 - multiply top and bottom by 3

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

Change fraction #2 to an equivalent fraction with the same denominator of 6 - multiply top and bottom by 2.

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

Now try these equations:

$$\frac{3}{5} + \frac{1}{3} =$$

$$\frac{1}{3} + \frac{1}{3} =$$

$$\frac{2}{9} + \frac{1}{9} =$$

$$\frac{7}{9} + \frac{4}{7} =$$

$$\frac{2}{4} + \frac{3}{4} =$$

$$\frac{2}{9} + \frac{4}{10} =$$

$$\frac{3}{6} - \frac{2}{8} =$$

$$\frac{3}{4} - \frac{1}{3} =$$

$$\frac{7}{10} - \frac{1}{6} =$$

Answers:

Equivalent fractions:

$$\frac{4}{6} \quad \frac{\div 2}{\div 2} = \frac{2}{3}$$

$$\frac{4}{16} \quad \frac{\div 4}{\div 4} = \frac{1}{4}$$

$$\frac{1}{3} \quad \frac{\times 5}{\times 5} = \frac{5}{15}$$

$$\frac{2}{3} \quad \frac{\times 10}{\times 10} = \frac{20}{30}$$

$$\frac{2}{4} \quad \frac{\div 2}{\div 2} = \frac{1}{2}$$

$$\frac{15}{21} \quad \frac{\div 3}{\div 3} = \frac{5}{7}$$

$$\frac{1}{12} \quad \frac{\times 4}{\times 4} = \frac{4}{48}$$

$$\frac{25}{30} \quad \frac{\div 5}{\div 5} = \frac{5}{6}$$

Adding and subtracting fractions:

$$\frac{3}{5} + \frac{1}{3} = \frac{14}{15}$$

$$\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$$

$$\frac{2}{9} + \frac{1}{9} = \frac{1}{3}$$

$$\frac{7}{9} + \frac{4}{7} = 1 \frac{22}{63}$$

$$\frac{2}{4} + \frac{3}{4} = 1 \frac{1}{4}$$

$$\frac{2}{9} + \frac{4}{10} = \frac{28}{45}$$

$$\frac{3}{6} - \frac{2}{8} = \frac{1}{4}$$

$$\frac{3}{4} - \frac{1}{3} = \frac{5}{12}$$

$$\frac{7}{10} - \frac{1}{6} = \frac{8}{15}$$