

## Grade 6 - Maths

### Student Study Pack

Week	Topic	Lesson	Resources
Week 21	Fractions 1	Simplification, addition & subtraction	KS3 One page 81-86
Week 22	Fractions 2	Conversions, multiplication & division	KS3 One page 87-91

\*if KS3 One Maths Textbook is not available, use notes and booklets provided in class.

#### Fractions 1

1. Write the following fractions in words:

a) $\frac{1}{3}$	
b) $\frac{4}{7}$	
c) $\frac{3}{8}$	
d) $\frac{12}{13}$	
e) $1\frac{1}{4}$	

2. Write the following words as fractions:

a) One fifth	
b) Two elevenths	
c) Three eighths	
d) Seven twelfths	
e) Three and two thirds	

3. Simplify the following fractions:

a) $\frac{3}{6}$	
b) $\frac{4}{10}$	
c) $\frac{12}{15}$	
d) $\frac{27}{36}$	
e) $\frac{18}{42}$	

### **Working with Fractions - Addition and Subtraction**

- In order to add or subtract, make the denominators (numbers on the bottom of the fractions) the same.
- Then add only the numerators (numbers on the top of the fractions).

Search this video on YouTube to help you understand how to add and subtract fractions.

Math Antics - Adding and Subtracting Fractions

<https://www.youtube.com/watch?v=5juto2ze8Lg&feature=youtu.be>

4. Working with fractions - Addition:

a) $\frac{1}{5} + \frac{3}{5} =$	
b) $\frac{1}{3} + \frac{1}{3} =$	
c) $\frac{2}{3} + \frac{2}{3} =$	
d) $1\frac{3}{5} + 1\frac{1}{5} =$	
e) $\frac{3}{8} + 1\frac{5}{8} =$	

5. Working with fractions - Subtraction:

a) $\frac{6}{7} - \frac{2}{7} =$	
b) $\frac{4}{5} - \frac{2}{5} =$	
c) $1\frac{2}{3} - \frac{4}{3} =$	
d) $\frac{9}{13} - \frac{5}{13} =$	
e) $\frac{3}{6} - \frac{6}{12} =$	

6. Super Maths! Calculate the answers in their simplest form (**hint**: try simplifying first):

a) $\frac{14}{21} + \frac{9}{27} =$	
b) $\frac{32}{40} - \frac{4}{16} =$	
c) $\frac{6}{7} - \frac{36}{42} =$	
d) $\frac{120}{144} - \frac{16}{24} =$	
e) $3\frac{21}{7} + 1 =$	

## Fractions 2



## Resources

Search these videos on YouTube to help you understand how to work with fractions.

What are percentages?

<https://youtu.be/JeVSmq1Nrpw>

Finding a percent of a number

<https://youtu.be/rR95Cbcjzus>

1. Convert between fractions, decimals and percentages:

<b>Fraction</b>			$\frac{1}{4}$			$\frac{1}{2}$		$\frac{7}{10}$		$\frac{4}{5}$	
<b>Decimal</b>	0.1	0.2		0.3			0.6		0.75		0.9
<b>Percentage</b>	10%				40%			70%			

<b>Fraction</b>	$1\frac{3}{4}$			$1\frac{1}{5}$		
<b>Decimal</b>		1.5				1.4
<b>Percentage</b>	175%		130%		170%	

## Working with Fractions - Further Instructions

### Multiplying Instructions

1. Multiply the tops (numerators) and the bottoms (denominators).

$$\frac{7}{8} \times \frac{2}{3} = \frac{14}{24}$$

2. Simplify

$$\frac{14}{24} \xrightarrow{\div 2} \frac{7}{12}$$

### Dividing Instructions

1. Flip the fraction you are dividing by (2nd one) and then multiply like above.

$$\frac{7}{8} \div \frac{2}{3} = \frac{7}{8} \times \frac{3}{2} = \frac{21}{16} \xrightarrow{\text{2. Simplify}} 1 \frac{5}{16}$$

## Working with Fractions - Multiplication

- Multiply the numerators together.
- Multiply the denominators together.
- Simplify.

Search this video on YouTube to help you understand how to multiply fractions.

Math Antics - Multiplying Fractions

<https://www.youtube.com/watch?v=qmfXyR7Z6Lk&feature=youtu.be>

### 2. Working with fractions - Multiplication:

a) $\frac{7}{8} \times \frac{1}{2} =$	
b) $\frac{4}{3} \times \frac{5}{11} =$	

c)	$\frac{8}{9} \times \frac{1}{6} =$	
d)	$\frac{3}{6} \times \frac{7}{8} =$	
e)	$\frac{2}{3} \times \frac{9}{8} =$	

### Working with Fractions - Division

- Flip the dividing fraction (second fraction) upside-down so that the numerator is the denominator and the denominator is now the numerator.
- Multiply like a normal fraction.
- Simplify.

Search this video on YouTube to help you understand how to divide fractions.

Math Antics - Dividing Fractions

<https://www.youtube.com/watch?v=4lkq3DgvmJo>

#### 3. Working with fractions - Division:

a)	$\frac{2}{3} \div \frac{9}{8} =$	
b)	$\frac{5}{7} \div \frac{9}{12} =$	
c)	$\frac{6}{10} \div \frac{3}{12} =$	
d)	$\frac{2}{3} \div \frac{1}{10} =$	
e)	$\frac{5}{8} \div \frac{1}{8} =$	