

SUBJECT: Maths

UNIT:

Year 7 Number



Key Concept

Mixed numbers
These are made up
of a whole number
and a fraction.

$$4\frac{3}{5}$$

$$= \frac{4 \times 5 + 3}{5}$$

$$= \frac{23}{5}$$

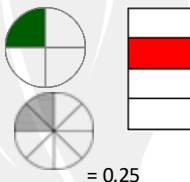
Key Concept FDP Equivalence

F	D	P
$\frac{1}{100}$	0.01	1%
$\frac{1}{10}$	0.1	10%
$\frac{1}{5}$	0.2	20%
$\frac{1}{4}$	0.25	25%
$\frac{1}{2}$	0.5	50%
$\frac{3}{4}$	0.75	75%

Key Concept

$$\frac{1}{4}$$

$$\frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{4}{16}$$



$$= 0.25$$

Examples

Make the denominators the same

$$\frac{3}{5} + \frac{2}{7} = \frac{21}{35} + \frac{10}{35} = \frac{31}{35}$$

4 Rules Fractions

Just multiply the tops and bottoms

$$\frac{3}{5} \times \frac{2}{7} = \frac{3 \times 2}{5 \times 7} = \frac{6}{35}$$

Flip the second fraction and change to a times

$$\frac{3}{5} \times \frac{7}{2} = \frac{21}{10}$$

Key Words

Equivalence: Two fractions are equivalent if one is a multiple of the other.
Simplify: Cancel a fraction down to give the smallest numbers possible.

Key Words

Place Value: The value a digit takes when placed in a particular position of a number.

Add Sum Total All Together Plus In all	Multiply Product Times Twice Total Multiplied by
Subtract Remain Difference Less than Fewer How many more Minus	Divide Quotient Goes into Split Equally Each

Key Concept

Multiply/Divide by powers of 10

10 000	1000	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$

Multiplying

X 10
X 100
X 1000

digits move LEFT 1 space
digits move LEFT 2 spaces
digits move LEFT 3 spaces



Dividing

+ 10
+ 100
+ 1000

digits move RIGHT 1 space
digits move RIGHT 2 spaces
digits move RIGHT 3 spaces



Key Concept

Factors:
Find these in pairs

12
1, 12
2, 6
3, 4

Multiples:

Start with the number itself
7 - 7, 14, 21, 28, ...

SUBJECT: Maths

UNIT:

Year 7 Algebra



Key Concept

Inverse Operations

Operation	Inverse
+	-
-	+
X	÷
÷	X
x^2	\sqrt{x}

Key Concept

Expanding Brackets

To multiply out brackets, we use the grid method.

$$5(x + 9)$$

x	x	+9
5	5x	+45

=5x + 45

$$7x(3x-2)$$

x	3x	-2
7x	35x	-14

$$=35x - 14$$

Key Concept

Collecting Like Terms

$$5x + 9 + 2x$$

$$5x + 2x = 7x$$

$$9 = 9$$

$$7x + 9$$

Key Words

Unknown: A letter which represents a number we do not know the value of.
Terms: The numbers and letters in the expression or equation.
Inverse: The operation which will do the opposite.