Maths	Fractions & Geometry	Year 7	Term 5

Week 1: Fractions recap	Week 2: Adding and Subtracting Fractions	Week 3: Constructions 1

numerator Top number of a fraction.

denominator Bottom number of a fraction.

If the numerator and denominator are the <u>same</u> then the fraction is <u>equal to 1</u> eg. $\frac{5}{5} = 1$

mixed number Made up of a whole number and a fraction eg. $2\frac{1}{3}$

improper fraction A fraction with a larger numerator than denominator eg. $\frac{5}{3}$

unit fraction Any fraction where the <u>numerator</u> is equal to 1.

common denominator When the denominators of two or more fractions are the <u>same</u>.

equivalent fraction A fraction that has the same *value* as another fraction

eg. $\frac{2}{3} = \frac{4}{6}$

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equivalent fractions We create equivalent fractions by multiplying (or dividing) **both** the numerator and denominator by the **same value**.

When fractions have the same denominator we call this a **common denominator.**

When <u>adding and subtracting fractions</u> they must have **common denominators**:

$\frac{3}{4} - \frac{1}{3}$ $\frac{9}{12} - \frac{4}{12}$

Not ready to be subtracted   **Ready** to be subtracted

To find a common denominator, identify a common multiple of the denominators then create an equivalent fraction.

algebraic fraction A fraction that contains at least one **variable** (letter)

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angle An amount of turn between two lines.

**protractor** A piece of equipment used to measure and draw angles.

acute angle An angle less than 90º.

obtuse angle An angle between 90º and 180º.

reflex angle An angle greater than 180º but less than 360º.

right angle An angle that is <u>exactly</u> 90º.

parallel Lines that remain a constant distance apart – they never meet. *Arrows show that lines are parallel.*

perpendicular Lines that meet at a right angle (90º)

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4 Times Tables

1 x 4 = 4	4 x 4 = 16	7 x 4 = 28	10 x 4 = 40
2 x 4 = 8	5 x 4 = 20	8 x 4 = 32	11 x 4 = 44
3 x 4 = 12	6 x 4 = 24	9 x 4 = 36	12 x 4 = 48

5 Times Tables

1 x 5 = 5	4 x 5 = 20	7 x 5 = 35	10 x 5 = 50
2 x 5 = 10	5 x 5 = 25	8 x 5 = 40	11 x 5 = 55
3 x 5 = 15	6 x 5 = 30	9 x 5 = 45	12 x 5 = 60

7 Times Tables

1 x 7 = 7	4 x 7 = 28	7 x 7 = 49	10 x 7 = 70
2 x 7 = 14	5 x 7 = 35	8 x 7 = 56	11 x 7 = 77
3 x 7 = 21	6 x 7 = 42	9 x 7 = 63	12 x 7 = 84

Extension work – Codes for related Independent Learning tasks on **Sparx Maths**   *Click on 'Independent Learning' on home page then enter code in search box*

Sparx Maths
M939 Constructing fractions
M410 Finding equivalent fractions
M601 Converting mixed numbers
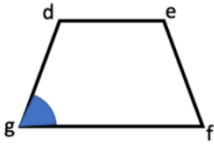
Sparx Maths
M410 Finding equivalent fractions
M835 Adding & subtracting fractions

Sparx Maths
M502 Types of angles
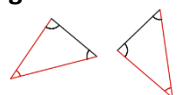M780 Measuring angles
M814 Line properties

Maths	Fractions & Geometry	Year 7	Term 5

Week 4: Constructions 2

"**Angle dgf**" can be written as:

$$d\hat{g}f \quad or \quad \angle dgf \quad or \quad \mathbf{dgf}$$
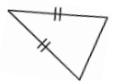
congruent — Two shapes that are exactly the same size and shape. They are *identical*.

scalene triangle — A triangle with all three sides of different lengths.

isosceles triangle — A triangle with two sides of equal length and one side different.

equilateral triangle — A triangle with all three sides the same length.

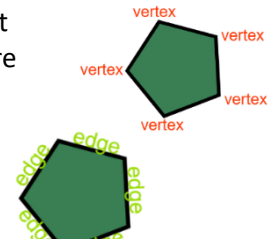*If sides are the same length we put dashes on them.*

To show whether triangles are congruent we use:
- **SSS** – side, side, side
- **SAS** – side, angle, side
- **ASA** – angle, side, angle

9 Times Tables

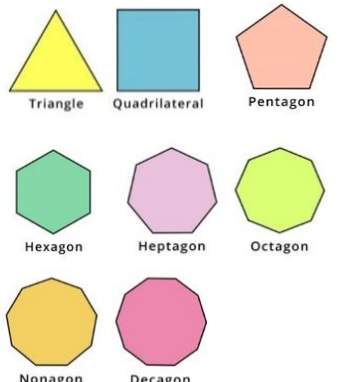|			
1 x 9 = 9	4 x 9 = 36	7 x 9 = 63	10 x 9 = 90
2 x 9 = 18	5 x 9 = 45	8 x 9 = 72	11 x 9 = 99
3 x 9 = 27	6 x 9 = 54	9 x 9 = 81	12 x 9 = 108

Week 5: Polygons

polygon — A 2D shape with straight sides.

regular polygon — A polygon where all sides and angles are equal.

vertex — A corner **or** a point where two or more lines meet.

edge — A **side** of a shape.

adjacent — Adjacent sides snare a corner. They are **next to** each other.

triangle – 3 sides
quadrilateral – 4 sides
pentagon – 5 sides
hexagon – 6 sides
heptagon – 7 sides
octagon – 8 sides
nonagon – 9 sides
decagon – 10 sides

Triangle   Quadrilateral   Pentagon
Hexagon   Heptagon   Octagon
Nonagon   Decagon

10 Times Tables

1 x 10 = 10	4 x 10 = 40	7 x 10 = 70	10 x 10 = 100
2 x 10 = 20	5 x 10 = 50	8 x 10 = 80	11 x 10 = 110
3 x 10 = 30	6 x 10 = 60	9 x 10 = 90	12 x 10 = 120

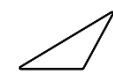## Week 6: Core knowledge recap

common denominator — When the denominators of two or more fractions are the <u>same</u>.

angle — An amount of turn between two lines.

acute angle   **obtuse angle**

reflex angle   **right angle**

protractor — A piece of equipment used to measure and draw angles.

parallel — Lines that remain a constant distance apart – they never meet.

congruent — Shapes that are exactly the same size/shape. They are *identical*.

scalene triangle   **isosceles triangle**   **equilateral triangle**

adjacent — Sides that are **next to** each other.

12 Times Tables

1 x 12 = 12	4 x 12 = 48	7 x 12 = 84	10 x 12 = 120
2 x 12 = 24	5 x 12 = 60	8 x 12 = 96	11 x 12 = 132
3 x 12 = 36	6 x 12 = 72	9 x 12 = 108	12 x 12 = 144

Extension work – Codes for related Independent Learning tasks on **Sparx Maths**   *Click on 'Independent Learning' on home page then enter code in search box*

Sparx Maths
- **M124** Understanding congruence
- **M276** Shape properties

Sparx Maths
- **M276** Shape properties

Sparx Maths
- **M541** Estimating angles
- **M331** Drawing angles
- **M351** Angles in triangles