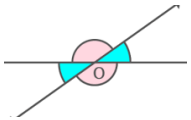
Maths	Geometry, Number & Probability	Year 7	Term 6

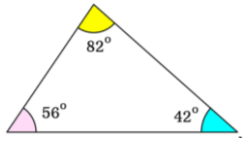
Week 1: Geometry

Angles around a point sum to 360°.

Adjacent **angles on a straight-line** sum to 180°.

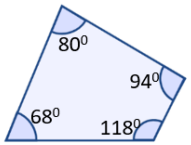


Vertically opposite angles are equal.



Interior angles in a triangle sum to 180°.

eg. 56 + 82 + 42 = 180



Angles in a quadrilateral sum to is 360°.

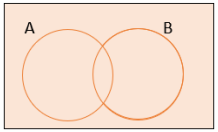
eg. 68 + 118 + 94 + 80 = 360

3 Times Tables				
	1 x 3 = 3	4 x 3 = 12	7 x 3 = 21	10 x 3 = 30
	2 x 3 = 6	5 x 3 = 15	8 x 3 = 24	11 x 3 = 33
	3 x 3 = 9	6 x 3 = 18	9 x 3 = 27	12 x 3 = 36

Week 2: Sets & Probability (1)

Venn diagram — A way to organise multiple categories of information.

universal set — A set that contains **ALL** elements. **ξ** is the symbol for universal set.

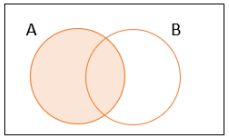


elements — Individual parts/items that make up a set.

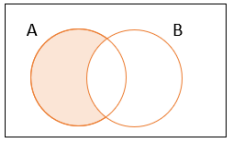
subset — A smaller group of elements from the universal set.

{ …. } — Curly brackets are used to show elements in a given set.

eg. Even numbers {2, 4, 6, 8 ….}



All elements in Set A. *(including those that also appear in Set B)*

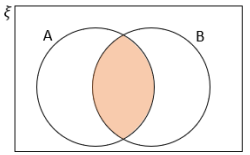


Elements that appear in Set A, but **not** in Set B.

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

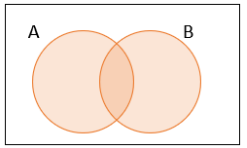
Week 3: Sets & Probability (2)

"A intersect B" — Intersection of Set A and Set B. ∩ is the symbol for intersection.



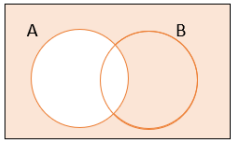
eg. $A \cap B$ is shaded.

"A union B" — Elements in Set A, Set B or **both**. ∪ is the symbol for union.



eg. $A \cup B$ is shaded.

"Complement A" — Elements that are **not** in Set A. **'** is the symbol for complement



eg. A' is shaded.

6 Times Tables				
	1 x 6 = 6	4 x 6 = 24	7 x 6 = 42	10 x 6 = 60
	2 x 6 = 12	5 x 6 = 30	8 x 6 = 48	11 x 6 = 66
	3 x 6 = 18	6 x 6 = 36	9 x 6 = 54	12 x 6 = 72

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

M818 Angles on a line & a point
M163 Vertically opposite angles
M351 Angles in triangles

Sparx Maths

M829 Venn diagrams
M834 Venn diagrams with set notation

Sparx Maths

M419 Probability from Venn diagrams

Maths	Geometry, Number & Probability	Year 7	Term 6

Week 4: Sets & Probability (3)

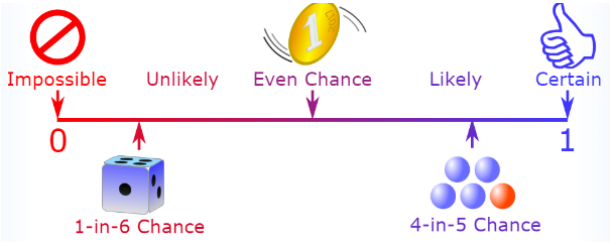
probability The chance that a given outcome will occur.

impossible An outcome that has zero chance of occurring.

eg. A six-sided dice will land on an 8.

certain An outcome that is sure to happen (definite).

eg. The sun will rise tomorrow.



bias To show favour towards one thing over another.

sum of probabilities The **sum of probabilities** for all outcomes = 1.

Blue	Green	Red
0.5	0.3	x

$0.5 + 0.3 + x = 1 \rightarrow x = 0.2$

8 Times Tables

1 x 8 = 8	4 x 8 = 32	7 x 8 = 56	10 x 8 = 80
2 x 8 = 16	5 x 8 = 40	8 x 8 = 64	11 x 8 = 88
3 x 8 = 24	6 x 8 = 48	9 x 8 = 72	12 x 8 = 96

Week 5: Number sense

estimate Using approximate values in a calculation to give a predicted answer rather than an exact answer.

effecient Working in a well-organised and competent way.

product ⊗ The result of a multiplication
10 x 2 = **20** ← Product

quotient ÷ The result of a division
10 ÷ 2 = **5** ← Quotient

sum + The result of an addition
10 + 2 = **12** ← Sum

difference − The result of a subtraction
10 – 2 = **8** ← Difference

factor a×b Factors are the numbers you multiply to create a product (always integers – *whole numbers*).

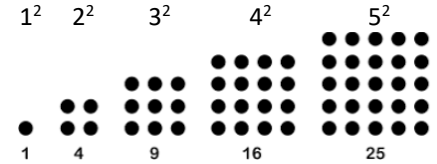
11 Times Tables

1 x 11 = 11	4 x 11 = 44	7 x 11 = 77	10 x 11 = 110
2 x 11 = 22	5 x 11 = 55	8 x 11 = 88	11 x 11 = 121
3 x 11 = 33	6 x 11 = 66	9 x 11 = 99	12 x 11 = 132

Week 6: Core knowledge recap

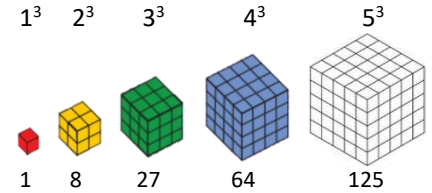
square numbers The product when you multiply a number by itself.

eg. $8^2 = 8 \times 8 = 64$

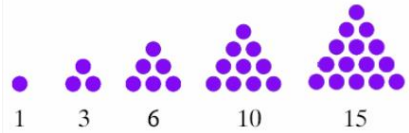


cube numbers The product when you multiply a number by itself three times.

eg. $6^3 = 6 \times 6 \times 6 = 216$



triangular numbers A number (of dots) that that can be made into an equilateral triangle.



prime number A number that has <u>exactly two factors</u> – it is only divisible only by itself and 1.

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

M655 Using probability phrases
M938 Writing probabilities
M755 Mutually exclusive events

Sparx Maths

M878 Estimating calculations
M823 Finding factors and using divisibility tests

Sparx Maths

M135 Calculating with powers and roots
M322 Finding prime numbers