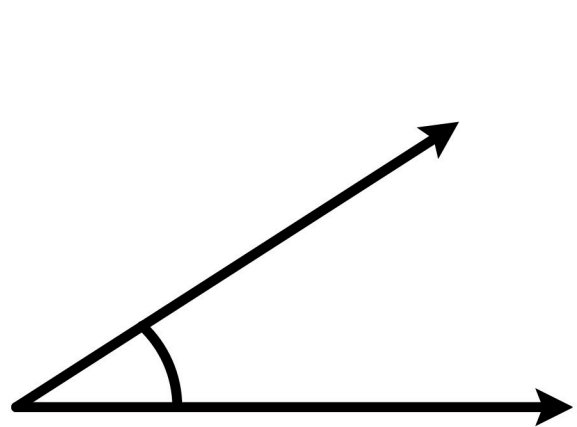
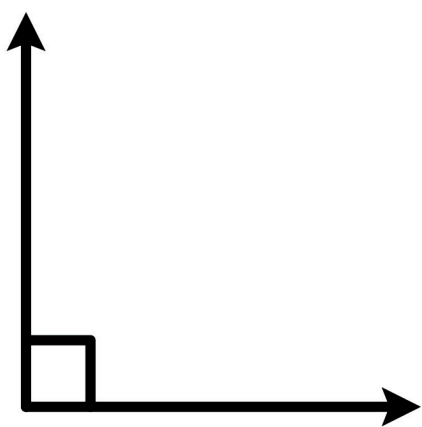


Types of Angles



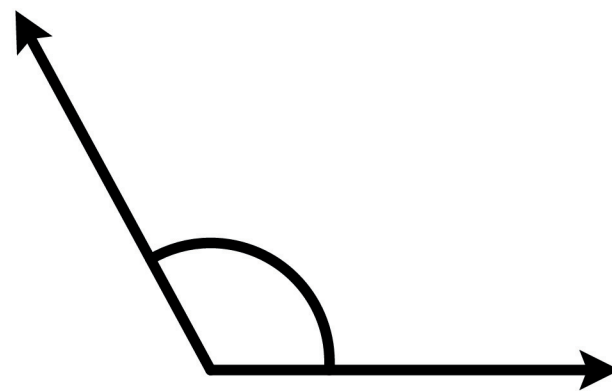
Acute Angle

Less than 90°



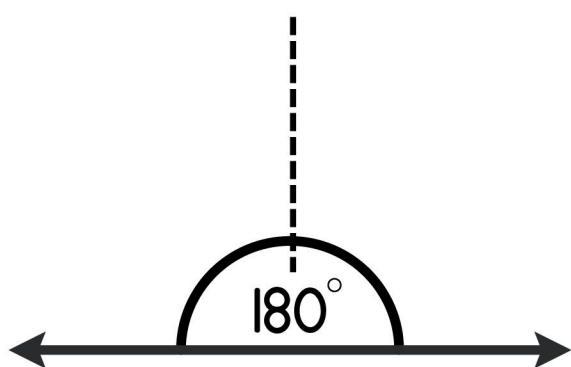
Right Angle

Exact 90°



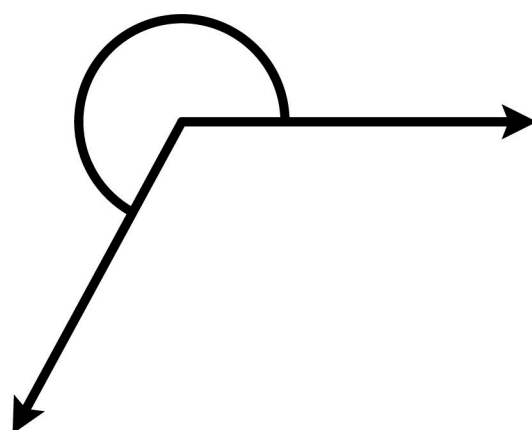
Obtuse Angle

Greater than 90°
but less than 180°



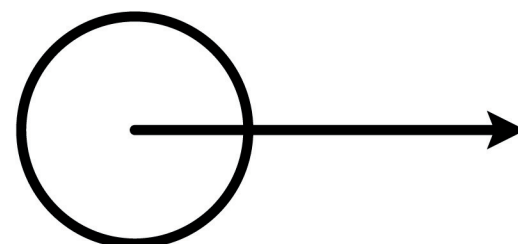
Straight Angle

Exact 180°



Reflex Angle

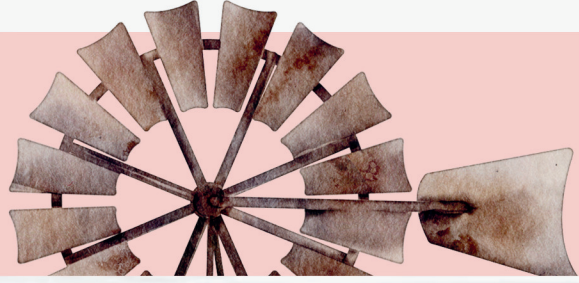
Greater than 180°
but less than 360°



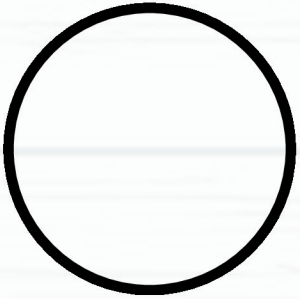



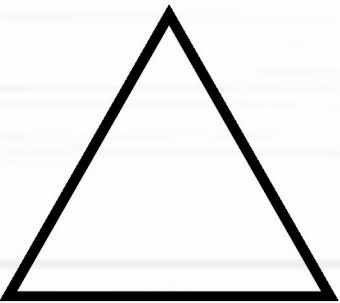

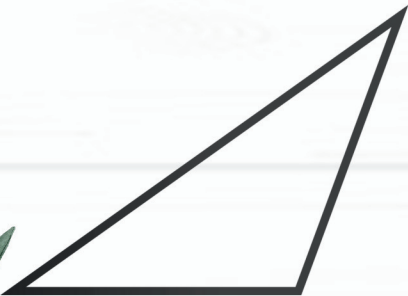
Full Rotation Angle

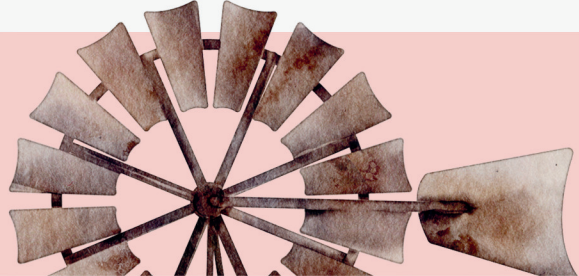
Exact 360°



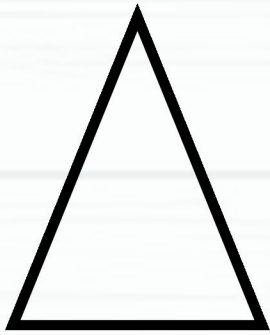
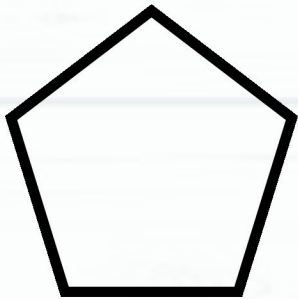
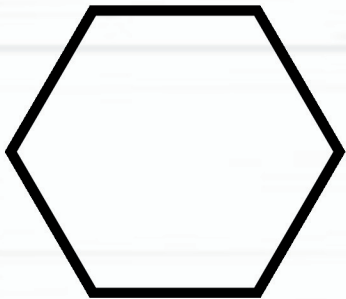

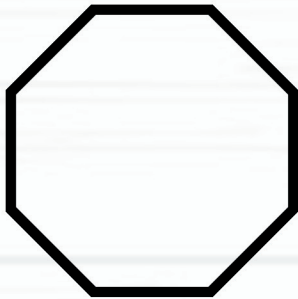
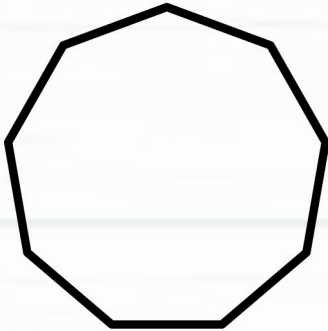
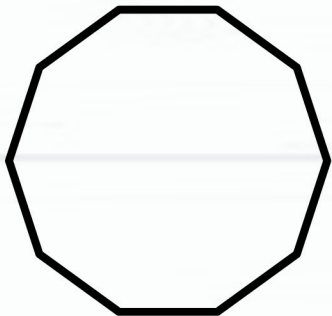


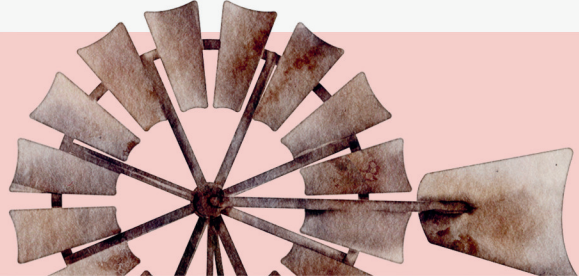
2D Shapes

Example	Shape	Sides	Vertices	Properties
	circle	1	0	
	semi-circle	2	2	Has 2 sides; 1 curved side and 1 straight side. The full arc is a 180° angle.
	square	4	4	Each angle equals 90° .
	rectangle	4	4	Has two pairs of parallel straight lines. Each angle equals 90° .
	equilateral triangle	3	3	Regular triangle. Each angle equals 60° .
	right-angled triangle	3	3	A triangle with one right angle. Right angle = 90°
	scalene triangle	3	3	An irregular triangle. All sides and angles are different.



2D Shapes

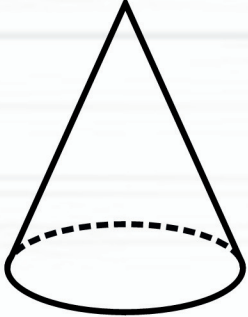

Example	Shape	Sides	Vertices	Properties
	Isosceles triangle	3	3	Has two sides and two angles that are the same.
	pentagon	5	5	A pentagon has 5 equal angles and sides. Each interior angle measures 108° . The interior angles add up to 540° .
	hexagon	6	6	A hexagon has 6 equal angles and sides. Each interior angle measures 120° . The interior angles add up to 720° .
	heptagon	7	7	A heptagon has 7 equal angles and sides. Each interior angle measures 128.57° . The interior angles add up to 900° .
	octagon	8	8	An octagon has 8 equal angles and sides. Each interior angle measures 135° . The interior angles add up to 1080° .
	nonagon	9	9	A nonagon has 9 equal angles and sides. Each interior angle measures 140° . The interior angles add up to 1260° .
	decagon	10	10	A decagon has 9 equal angles and sides. Each interior angle measures 144° . The interior angles add up to 1440° .

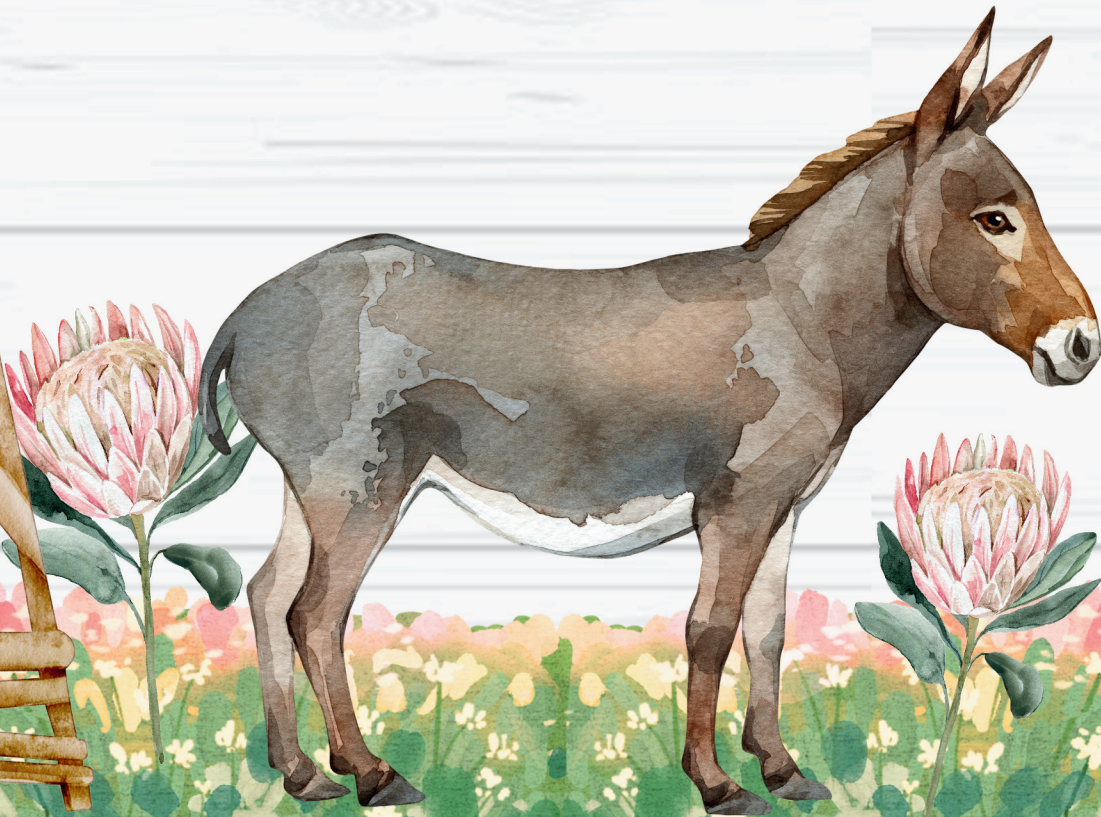
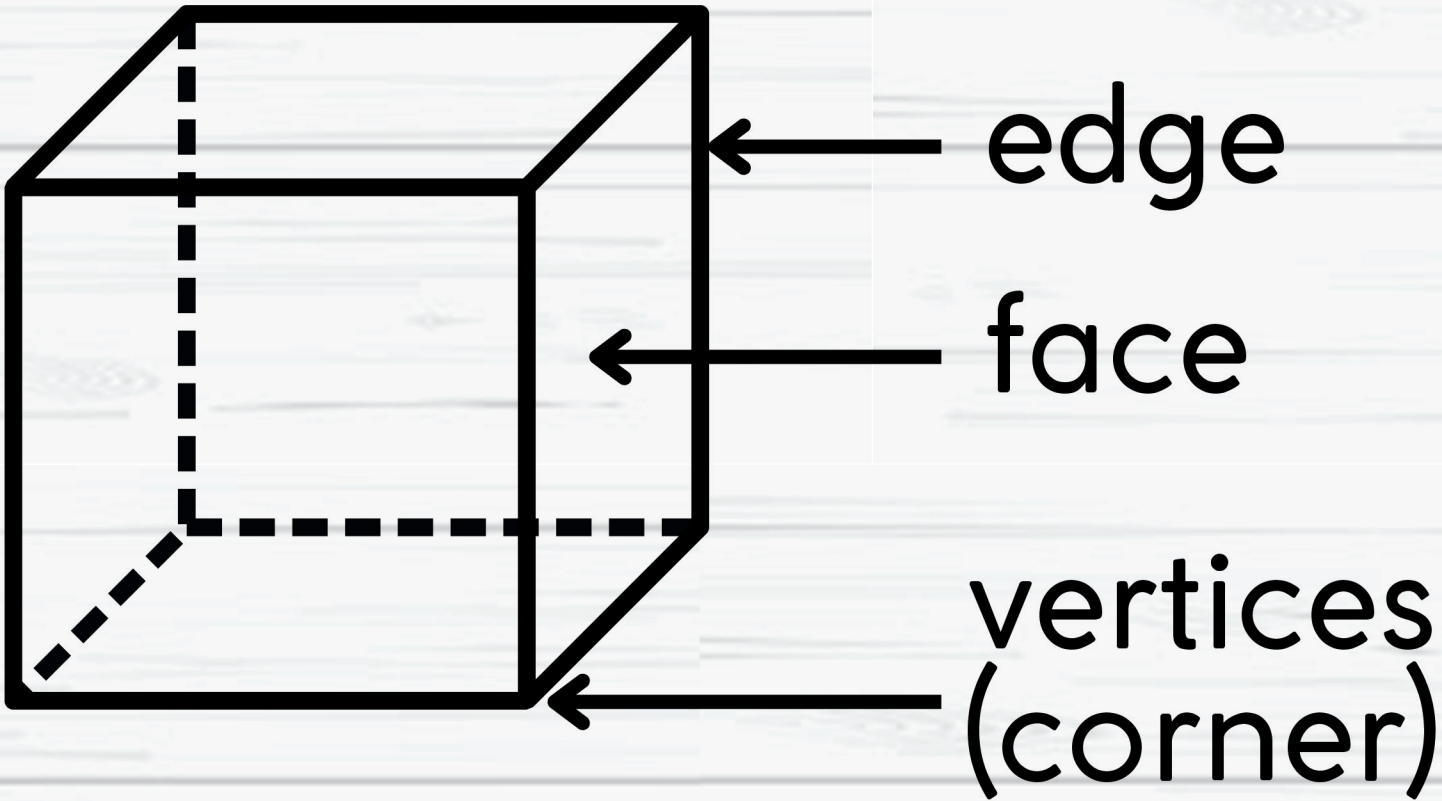


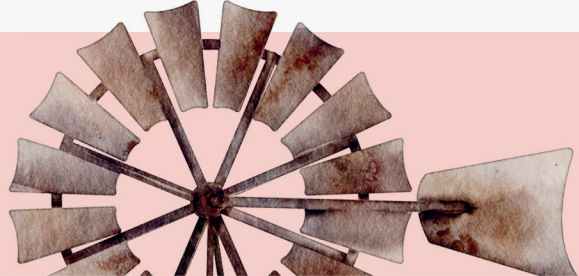
3D Objects

Example	Shape	Faces	Edges	Vertices
	cube	6	12	8
	rectangular prism (Cuboid)	6	12	8
	triangular prism	5	9	6
	sphere	1 curved surface	○	○
	hemisphere	1 curved surface 1 face	1	○
	square-based pyramid	5	8	5
	tetrahedron	4	6	4

Example	Shape	Faces	Edges	Vertices
---------	-------	-------	-------	----------

	cone	1 curved surface 1 face	1	1
	cylinder	1 curved surface 2 faces	2	0





Time Tables

$\times 1$

1	$\times 1$	=	1
2	$\times 1$	=	2
3	$\times 1$	=	3
4	$\times 1$	=	4
5	$\times 1$	=	5
6	$\times 1$	=	6
7	$\times 1$	=	7
8	$\times 1$	=	8
9	$\times 1$	=	9
10	$\times 1$	=	10
11	$\times 1$	=	11
12	$\times 1$	=	12

$\times 2$

1	$\times 2$	=	2
2	$\times 2$	=	4
3	$\times 2$	=	6
4	$\times 2$	=	8
5	$\times 2$	=	10
6	$\times 2$	=	12
7	$\times 2$	=	14
8	$\times 2$	=	16
9	$\times 2$	=	18
10	$\times 2$	=	20
11	$\times 2$	=	22
12	$\times 2$	=	24

$\times 3$

1	$\times 3$	=	3
2	$\times 3$	=	6
3	$\times 3$	=	9
4	$\times 3$	=	12
5	$\times 3$	=	15
6	$\times 3$	=	18
7	$\times 3$	=	21
8	$\times 3$	=	24
9	$\times 3$	=	27
10	$\times 3$	=	30
11	$\times 3$	=	33
12	$\times 3$	=	36

$\times 4$

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

$\times 5$

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

$\times 6$

1	$\times 6$	=	6
2	$\times 6$	=	12
3	$\times 6$	=	18
4	$\times 6$	=	24
5	$\times 6$	=	30
6	$\times 6$	=	36
7	$\times 6$	=	42
8	$\times 6$	=	48
9	$\times 6$	=	54
10	$\times 6$	=	60
11	$\times 6$	=	66
12	$\times 6$	=	72

$\times 7$

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

$\times 8$

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

$\times 9$

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

$\times 10$

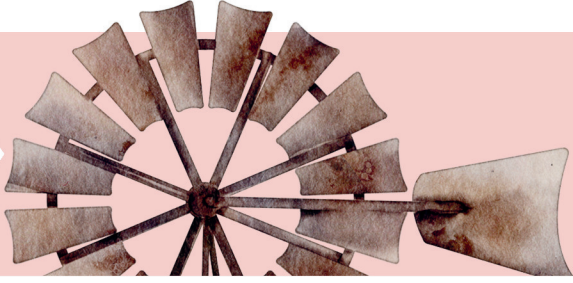
1	$\times 10$	=	10
2	$\times 10$	=	20
3	$\times 10$	=	30
4	$\times 10$	=	40
5	$\times 10$	=	50
6	$\times 10$	=	60
7	$\times 10$	=	70
8	$\times 10$	=	80
9	$\times 10$	=	90
10	$\times 10$	=	100
11	$\times 10$	=	110
12	$\times 10$	=	120

$\times 11$

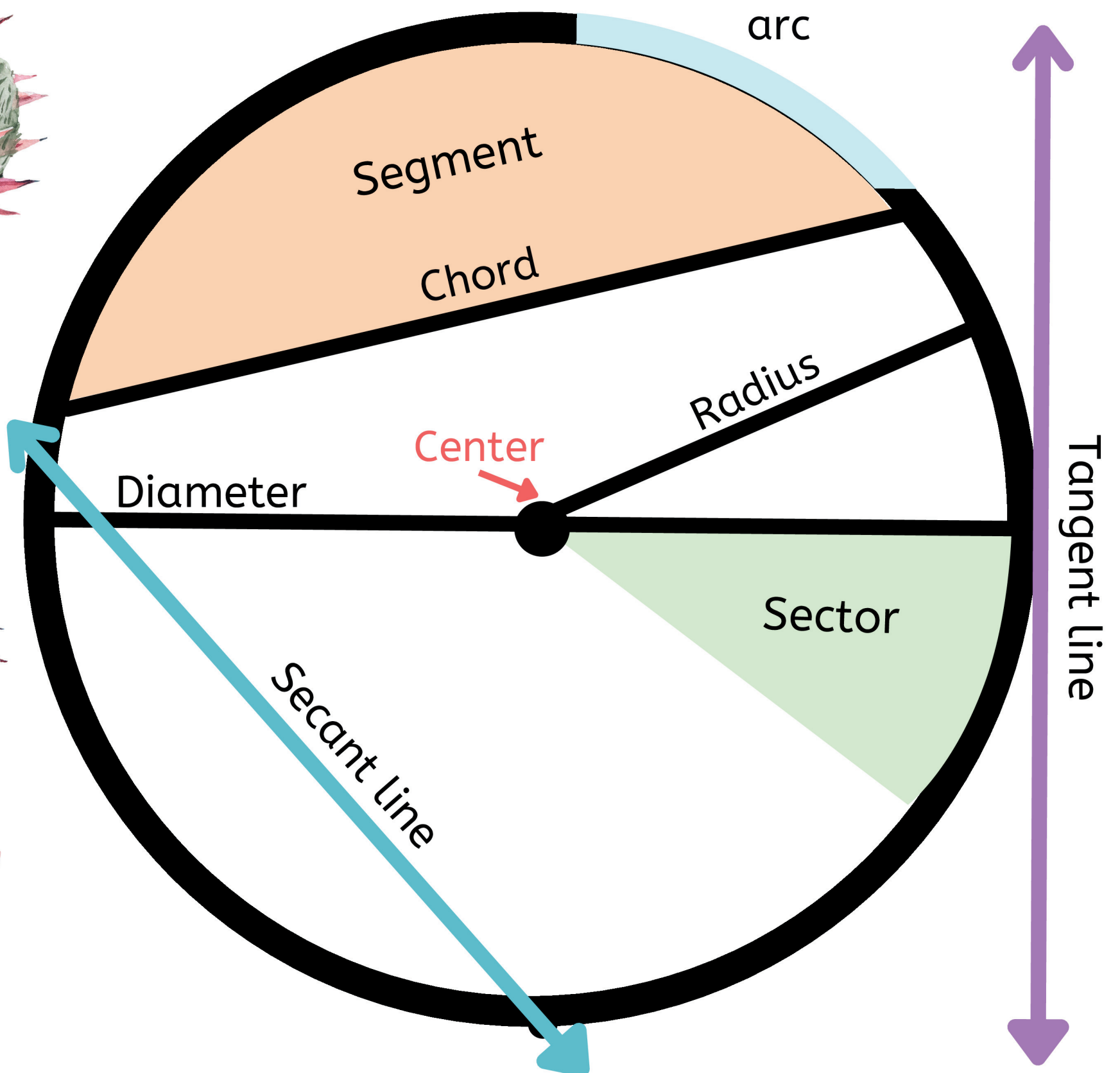
1	$\times 11$	=	11
2	$\times 11$	=	22
3	$\times 11$	=	33
4	$\times 11$	=	44
5	$\times 11$	=	55
6	$\times 11$	=	66
7	$\times 11$	=	77
8	$\times 11$	=	88
9	$\times 11$	=	99
10	$\times 11$	=	110
11	$\times 11$	=	121
12	$\times 11$	=	132

$\times 12$

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



Parts of a circle



CENTER

The middle point of the circle from which all points on the circle are equally far.

CHORD

A line segment with both endpoints on the circle. A chord does not necessarily pass through the center.

TANGENT LINE

A line that touches the circle at exactly one point and does not enter the circle.

ARC

A curved part of the circumference between two points on the circle.

RADIUS

A line segment from the center to any point on the circle. It is always the same length for a given circle.

SECANT LINE

A line that intersects the circle at two points and continues beyond the circle.

SEGMENT

The region of a circle enclosed by a chord and the corresponding arc.

SECTOR

A portion of the circle enclosed by two radii and an arc (like a pizza slice).

CIRCUMFERENCE

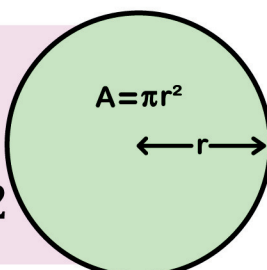
The perimeter or distance around the circle.

It is calculated using the formula: $C = 2\pi r$

AREA OF A CIRCLE

The space inside a circle's circumference

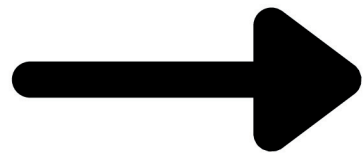
It is calculated using the formula: $A = \pi r^2$



Fractions

NUMERATOR

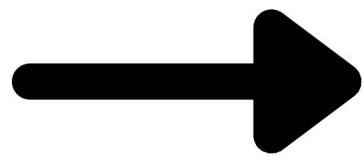
The numerator shows how many parts you have. This numerator shows there is one part.



$$\frac{1}{2}$$

DENOMINATOR

The denominator shows how many parts the whole is divided into. This fraction shows it is divided into two parts.



$$\frac{1}{2}$$

