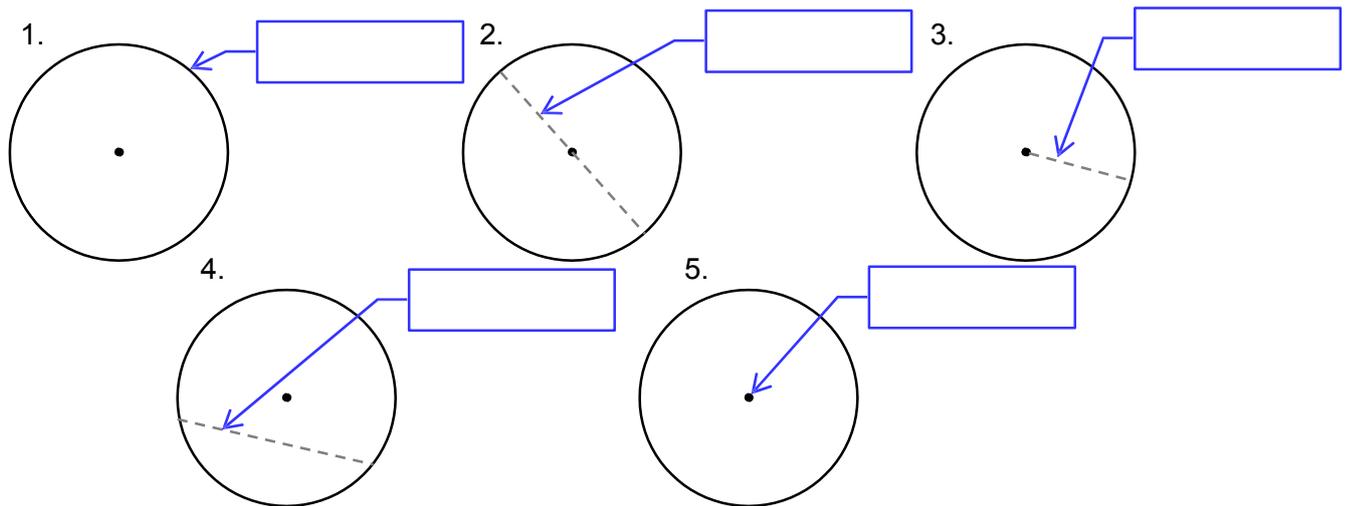


Topic Check In - 8.05 Circles

Requires a compass.

Name the parts of the following circles:



6. Explain why the diameter can be considered as a type of chord.
7. Naomi says the diameter is always two times the radius.
Explain why Naomi is correct.
8. Maria draws two intersecting circles, each with radius 4 cm. Explain how she can use her drawing to construct a rhombus.
9. Draw three chords inside a circle in order to create a diagram with exactly three lines of symmetry.
10. Use two different sized circles to construct a kite.

Extension

Draw a circle with centre O . Include a diameter, labelled AB . Choose a point C on the circumference and form a triangle ABC . Measure the angle at C . What do you notice?

Is this true wherever C is placed on the diameter and for different sized circles?



Answers

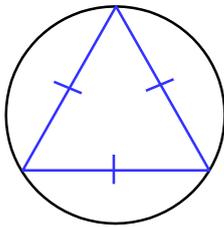
1. Circumference
2. Diameter
3. Radius
4. Chord
5. Centre
6. A diameter is a special chord that passes through the centre.
7. The radius is the distance from the centre to the circumference.

The diameter is the distance from one point on the circumference to another point on the circumference passing through the centre of the circle so it includes 2 radii.

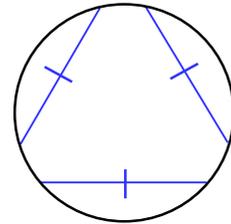
Therefore the diameter is double the radius.

8. The distance from the centre of each circle to the intersection of the circles is equal to the radius. Use this to form four equidistant lines to create a rhombus.

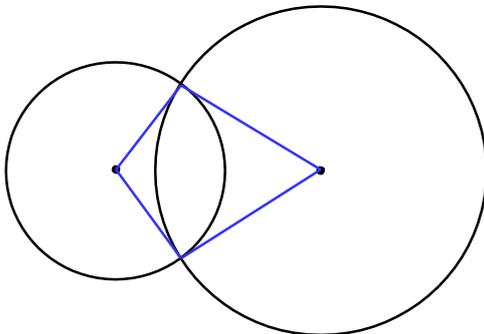
9.



Note: the chords must be equal length but do not need to intersect to form an equilateral triangle e.g.



10.



Lines drawn from each centre to the intersections give two pairs of equal adjacent lengths.

Extension

Angle in a semicircle is always 90 degrees.



GCSE (9-1) MATHEMATICS



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Assessment Objective	Qu.	Topic	R	A	G
AO1	1	Understand the term circumference.			
AO1	2	Understand the term diameter.			
AO1	3	Understand the term radius.			
AO1	4	Understand the term chord.			
AO1	5	Understand the term centre.			
AO2	6	Understand the relationship between chord and diameter.			
AO2	7	Explain the relationship between radius and diameter.			
AO2	8	Apply knowledge of radius to solve a construction problem.			
AO3	9	Apply knowledge of radius to solve a construction problem.			
AO3	10	Apply knowledge of radius to solve a construction problem.			

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