CIRCLE THEOREMS 2

Teacher notes

Learning objectives:

1) Know a rule about angles subtended from the same arc of a circle.

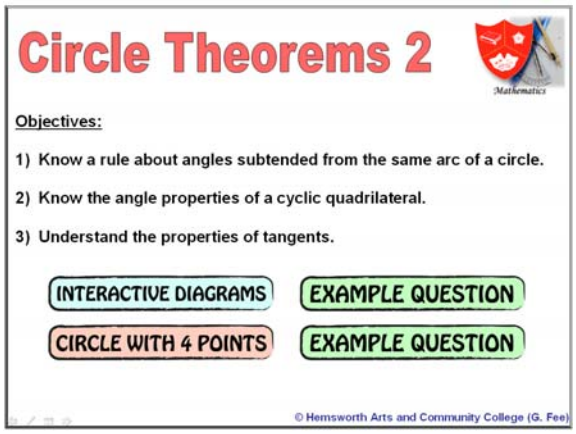
2) Know the angle properties of a cyclic quadrilateral.

3) Understand the properties of tangents.

Teacher presentation

The teacher presentation is designed as a focus for whole class teaching by providing:

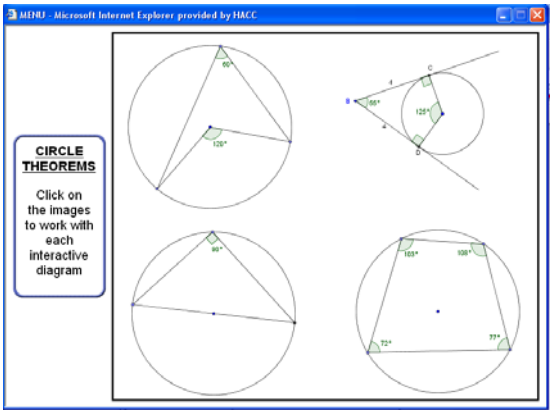
- visual stimulation / animation to aid understanding
- structure for teacher-led discussion
- opportunities for thinking skills development



The animations in each slide are meant to be played step by step by the teacher to help structure the questioning and class discussion.

The presentation is menu driven - an outline of each menu item is given below:

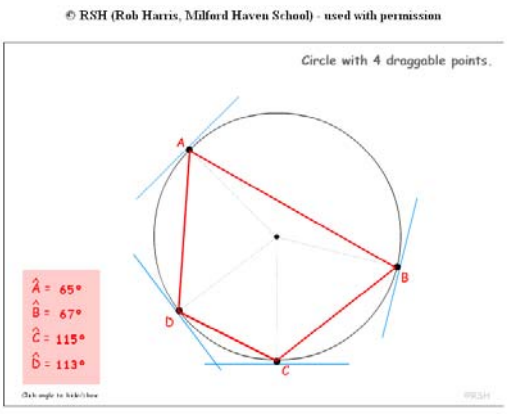
INTERACTIVE DIAGRAMS



This consists of a series of dynamic geometry diagrams to support questioning and discussion. All except the bottom left diagram on the menu page are relevant to this lesson.

Each diagram can be manipulated to encourage thinking about the angle properties.

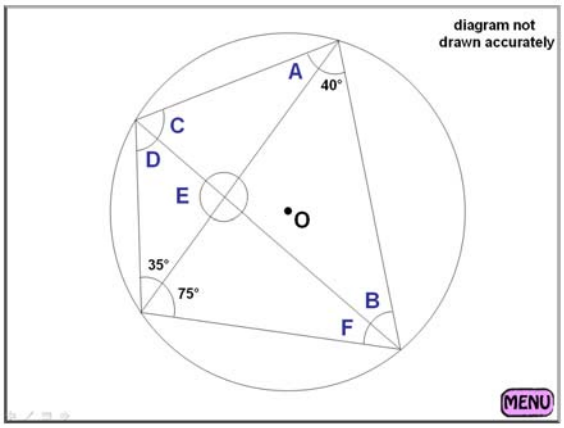
CIRCLE WITH 4 POINTS



This interactive diagram has four moveable points on the circumference of a circle.

This could be used by the teacher to lead an investigation into the angle properties of cyclic quadrilaterals and the angles subtended at the circumference from the same arc of a circle.

EXAMPLE QUESTION

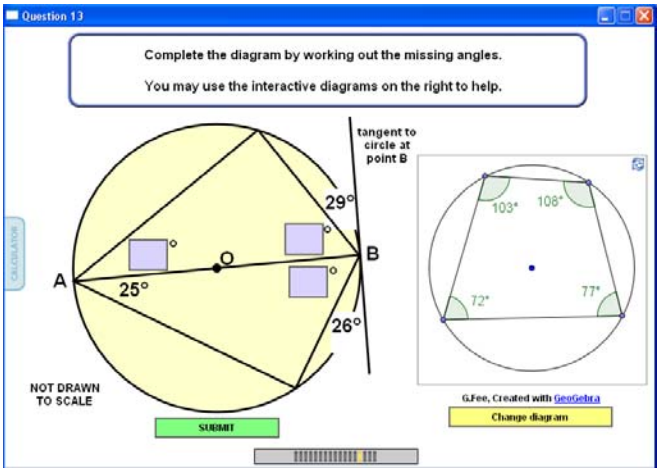


There are two worked examples. One angle at a time is revealed as the teacher plays through each slide.

Possible questioning:

- Which angle property could you use to calculate angle D?
- Can you tell me any angles that are equal to each other? why?
- Can you find any angles that have a total of 180˚?

Learning object



This is an interactive learning and assessment tool designed to engage students in solving problems related to the learning objectives.

This is meant to follow the teacher presentation and be used by students to consolidate learning and to practise applying their knowledge and understanding.

This activity includes:

- A revision video to support note taking.
- 7 multiple choice questions to assess understanding of angle properties.
- 8 questions with interactive diagrams to support learning.