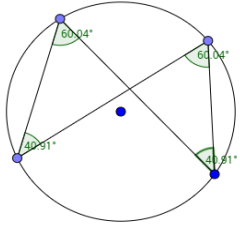


## Goals



By the end of this unit, students:

- understand the concepts and techniques in combinatorics, geometry and vectors
- apply reasoning skills and solve problems in combinatorics, geometry and vectors
- communicate their arguments and strategies when solving problems
- construct proofs in a variety of contexts including algebraic and geometric
- interpret mathematical information and ascertain the reasonableness of their solutions to problems.

**This week's focus:**

Angle Properties in a Circle  
Intersecting Chords

## Theoretical Components

STEP 1:

Intersecting Chord Theorem:

<https://bit.ly/36mOXgc>

Intersecting Secant Theorem:

<https://bit.ly/3JjFWTP>

Intersecting Secant Angles Theorem:

<https://bit.ly/3COevnP>

Inscribed Angle:

<https://bit.ly/3MXH1CY>

Central Angle Theorem:

<https://bit.ly/365z26f>

Radius of an arc or segment:

<https://bit.ly/3tht1fn>

## Practical Components

STEP 2:

Attempt all the questions:

ABOUT/RESOURCES/WK08

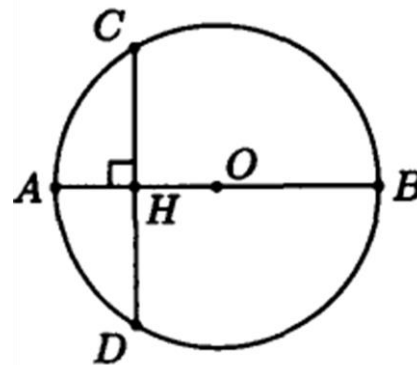
Attempt at least 4-6 questions from each set.

Additional Practice questions (optional):

<https://bit.ly/3Jd8Jt7>

## Investigation

Study the diagram below:



Diameter  $AB$  of a circle has length a 2-digit integer (base ten). Reversing the digits gives the length of the perpendicular chord  $CD$ . The distance from their intersection point  $H$  to the centre  $O$  is a positive rational number. Determine the length of  $AB$ .

Due on Monday of WK09, 20 marks – see rubric.