

# OCR Core 1

## Coordinate Geometry

### Section 2: Circles

#### Study Plan

##### Background

This section focuses on circles, looking at their equations and properties. You will often need to use some of the work in section 1, as well as the work in this section, to solve problems involving circles.

##### Detailed work plan



1. As an introduction to circles, look at the [Circles dynamic spreadsheet](#) (you will find some instructions in the [Notes and Examples](#)). Also look at the Flash resources [Equation of a circle centre O](#) and [Equation of a circle centre \(a, b\)](#).



2. Read section 13.1 (pages 196 – 199). It is important that you can find the centre and radius of a circle easily from its equation. Practice will help. There are some additional examples in the [Notes and Examples](#).



3. **Exercise 13A**  
Attempt all the questions.



4. For extra practice try the interactive questions [Finding the radius and centre of a circle](#) (circle equation in its simplest form), [Finding the radius and centre of a circle](#) (circle equation in its expanded form) and [Find the equation of a circle](#) (from its centre and one point on its circumference).



5. Read section 13.2 (pages 200 – 202). It is also important to learn these facts about a circle as they will sometimes help you find the quickest way to a solution for a problem.



6. These properties are demonstrated in the Flash resources [Angle in a semicircle](#), [Perpendicular to a chord](#), and [Tangent and radius](#).



7. Read section 13.3 (pages 202 – 205). This looks at finding the intersection points of lines and circles, using similar methods to those covered in chapter 4. There is a further example in the [Notes and Examples](#).



8. You can also look at the [Circles dynamic spreadsheet](#) (Circle and a line) and the Flash resource [Intersection of a circle and a line](#).

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### 9. Exercise 13B

Attempt questions 1, 2, 3, 6, 7, 9, 11, 12, 14 and 15.



10. For extra practice try the interactive questions **Circle and line intersection.**