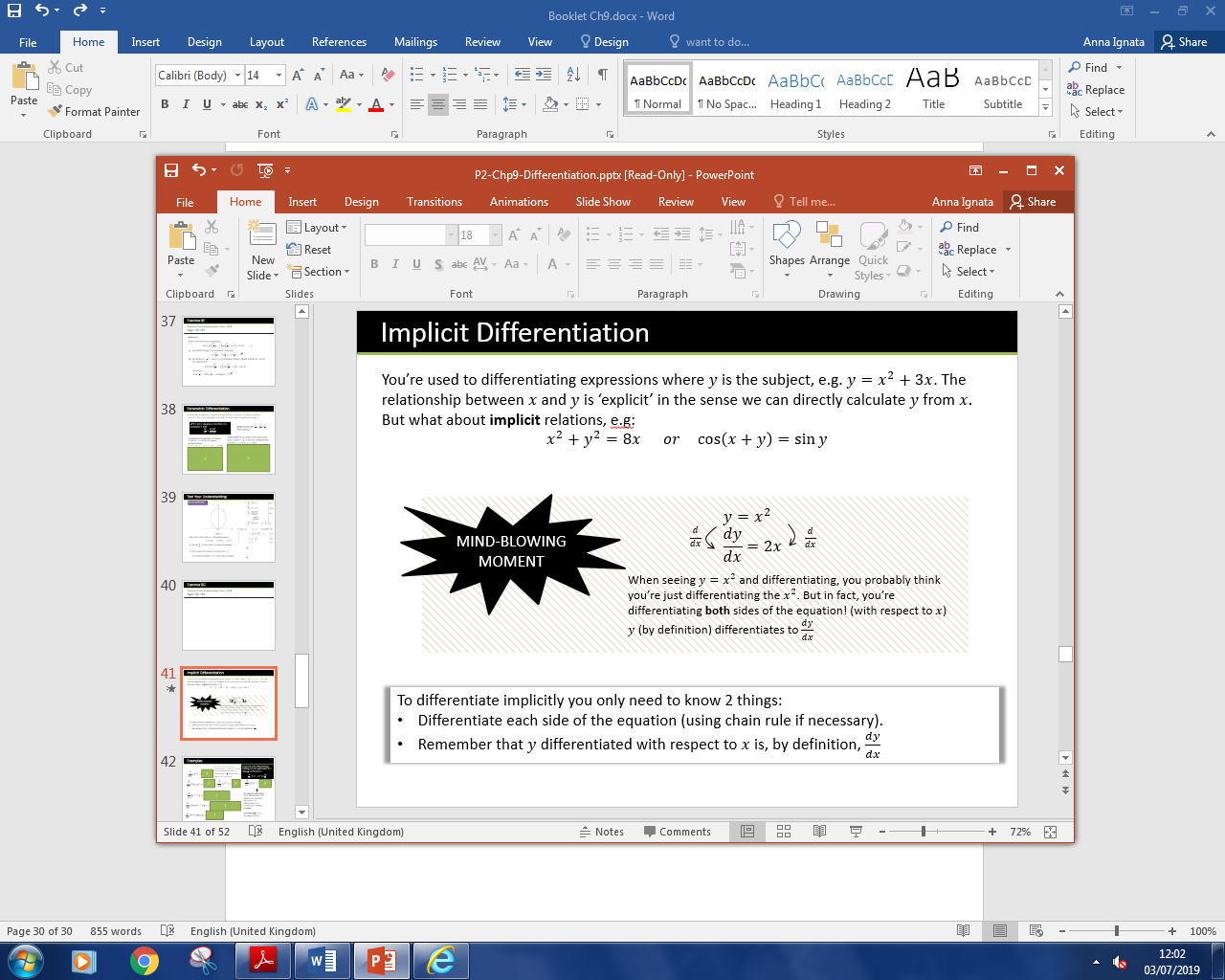
**Implicit Differentiation**

You’re used to differentiating expressions where is the subject, e.g. . The relationship between and is ‘explicit’ in the sense we can directly calculate from .

But what about **implicit** relations, e.g:



**In general, when differentiating a function of , but with respect to , slap a on the end. i.e.**

**Examples**

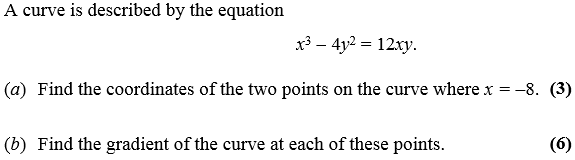
**Meatier Examples**

**[Textbook] Find in terms of and where**

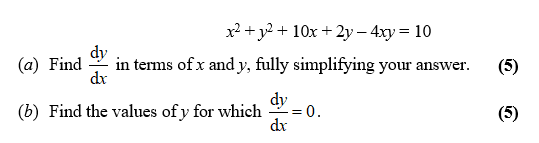
**[Textbook] Find the value of at the point , where**

**Test Your Understanding**

C4 Jan 2008 Q5

****

C4 June 2014(R) Q3



Exercise 9H Page 255-256