

Syllabus update

Cambridge International Level 3 Pre-U Certificate in Further Mathematics (Short Course) (1348) (for examination in 2016, 2017 and 2018)

We have updated this syllabus. The latest syllabus is version 3, published September 2016.

The Pre-U list of mathematical formulae and statistical tables (MF20) has been updated for examinations from June 2017. The updated version will be issued for future examinations.

The MF20 formulae list is duplicated on pages 16 to 33 of the updated syllabus document. There are no substantive changes to MF20 that affect this syllabus.

The following are changes made to version 2 of the syllabus, published September 2015.

Following an internal review of our Pre-U Further Mathematics papers, we have updated the specimen assessment materials for examination from 2016.

Individual questions in the specimen assessment materials have been updated in terms of wording and structure. A limited number of questions have been updated, and the overall style of assessment remains the same, but the changes better support an appropriate profile of demand. The changes do not affect the content of the qualification.

There is a correction to the equations for arc length on page 19. The correction has been made to all three forms: the form for cartesian coordinates, the parametric form and the polar form.

Cartesian coordinates form: $s = \int \sqrt{1 + \left(\frac{dy}{dx}\right)^2} dx$ has been updated to be $s = \int \sqrt{1 + \left(\frac{dy}{dx}\right)^2} dx$

Parametric form: $s = \int \sqrt{\left(\frac{dx}{dt}\right)^2 + \left(\frac{dy}{dt}\right)^2} dt$ has been updated to be $s = \int \sqrt{\left(\frac{dx}{dt}\right)^2 + \left(\frac{dy}{dt}\right)^2} dt$

Polar form: $s = \int \sqrt{r^2 + \left(\frac{dr}{d\theta}\right)^2} d\theta$ has been updated to be $s = \int \sqrt{r^2 + \left(\frac{dr}{d\theta}\right)^2} d\theta$

The following are changes made to version 1 of the syllabus, published February 2014.

We reviewed and clarified the syllabus content. Additional detail in the content of the following syllabus sections has been provided:

- 'roots of polynomial equations' (page 12 of the syllabus)
- 'differential equations' (page 14 of the syllabus).

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