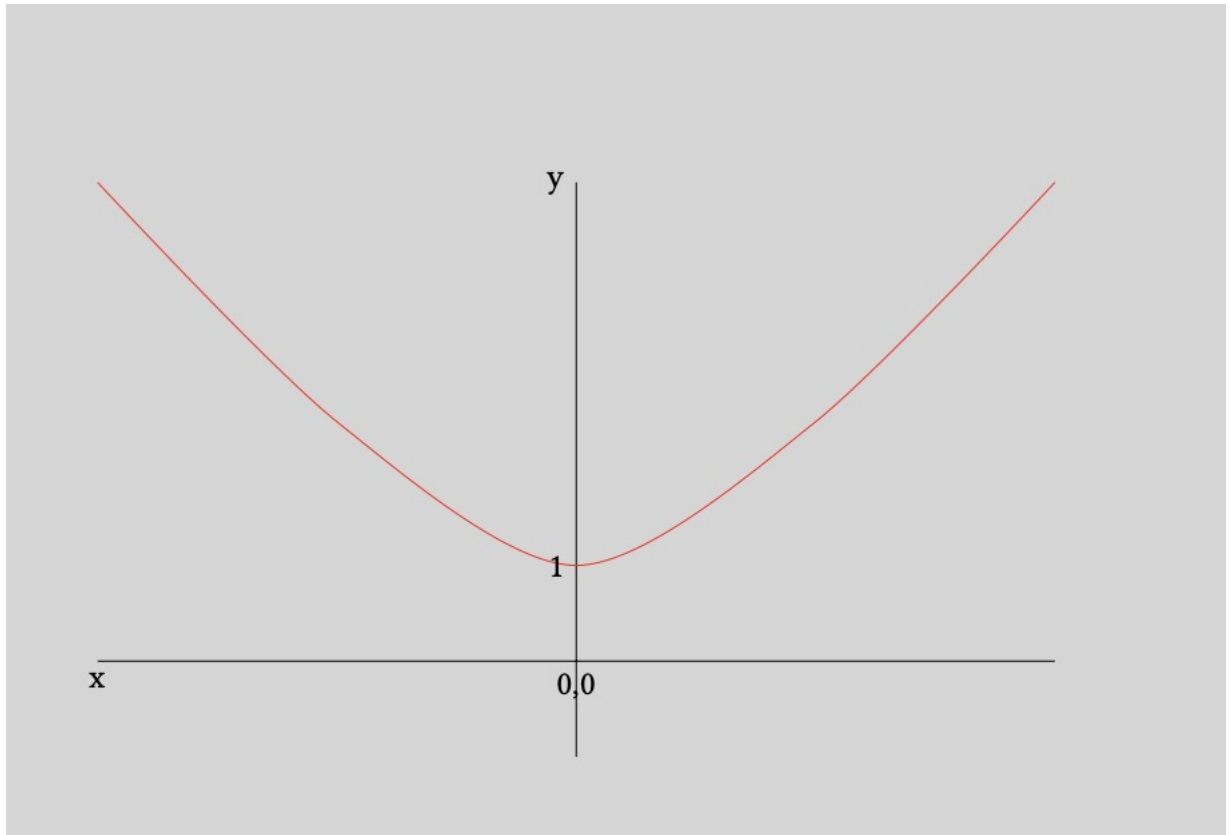


Question 1:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Question 2:

$$xy \times xz = x^2yz$$

Question 3:

Question 4:

The screenshot shows the MST124 website interface. At the top, there are tabs for 'Current weeks' and 'All weeks', with 'All weeks' selected. A dropdown menu shows 'EXPAND ALL'. Below the tabs, a message states 'You last viewed: Tutorial clips for Unit 2 in Weeks 3-4'. The main content area is titled 'Welcome' and shows '8 of 11 completed'. A section for 'Starting MST124 (Book A, Unit 1: Algebra)' indicates '19 of 21 completed' and '5-18 October'. A list of tasks follows, each with a green checkmark indicating completion:

- Read the MST124 Guide, familiarise yourself with this website and watch the introductory video, 'Welcome to MST124'.
- MST124 Guide PDF | 1.1 MB
- MST124 Guide errata (page 20 and page 23): Please note that TMA 01 now only covers Unit 1. TMA 02 now covers Units 2, 3, 4, 5, 6.
- Welcome to MST124
- Work through the Introduction and Section 1 of the *Computer algebra guide*. It introduces you to Maxima, which you need to install to study MST124. Further information is available from the 'Computer resources' page.
- Maxima website

The 'Maxima website' section contains the following text:

We are aware some Mac users are experiencing difficulties when using Maxima on the latest Mac OS (Sonoma), causing wxmaxima to crash on some computers. If you cannot get Maxima installed, then there are instructions below which should help fix this, or there is a link in the Computer Resources to an Open Computing Lab version of Maxima which you can access via your web browser. [Website: Essential mathematics 1](#) | [OU online](#) ([open.ac.uk](#))

If you need further advice regarding this then please ask in the Maxima forum

We apologise for any inconvenience caused by this unforeseen outcome of the Mac OS (Sonoma) operating system update.

The right sidebar contains sections for 'Tutor' (Munira Patel, Contact your tutor), 'News' (Welcome Tutorial - Weds 2nd Oct, Posted: 2 Oct), 'Reminder that...', 'Mathematics news' (Careers and Opportunities, Posted: 8 Oct), and 'Recent activity' (Book A, General).

Question 5: Solve the equation:

$$\frac{x}{5} - (1 + x) = \frac{2}{3}$$

Eliminate fractions by multiplying by the LCM, 15.

$$15 \left[\frac{x}{5} - (1 + x) \right] = 15 \cdot \frac{2}{3}$$

Distribute the 15.

$$\frac{15x}{5} - 15(1 + x) = \frac{30}{3}$$

Simplify.

$$3x - 15 - 15x = 10$$

Combine like terms.

$$-12x - 15 = 10$$

Add 15 to both sides to isolate x .

$$-12x = 25$$

Divide by -12 to solve for x .

$$x = \frac{-25}{12}$$