

Lesson Plan for S₄

TOPIC : QUADRATIC EQUATION II

Class Length: 60 minutes

Objectives of the Lesson

1. Students understand the concepts of quadratic equations.
2. Students are able to solve quadratic equations using the method of completing the square.
3. Students can use the quadratic formula to find the roots of a quadratic equation.

Lesson preparation items:

1. Lesson slides (provided)
2. Create classroom [YoTeach!](#) backchannel chatroom
 - a. E.g.: <https://palms.polyu.edu.hk:8448/yo/SSMath2>, password: Fred
3. Prepare Realtimeboards with completing the square and quadratic formula
 - a. E.g.: https://miro.com/app/board/ogJ_ky5LWs4=
4. Setup [Badaboom!](#) game quizzes
 - a. Quiz 1: question folder ID: [folder_5e7c136f3b71540017c86c92](#)
 - b. Quiz 2: question folder ID: [folder_5e7c1d7a3b71540017c86c93](#)

Lesson Stage	Content / Topic	Activity / Tool	Class / Group / Individuals	Time
Review of pre-existing knowledge	Factorization	Badaboom Quiz 1: To ask students to answer both conceptual questions and practical problems in Badaboom to recall previous learning	Individuals	5 minutes
Introduce and discuss concepts	Completing the square method	Lesson slides: Quadratic Equations II	Class	10 minutes
Apply and explore concepts	Completing the square method	Realtimeboard: To ask students to use Realtimeboard to solve the quadratic equations with the method of <i>completing the square</i>	Groups	10 minutes
Introduce and discuss concepts	Quadratic formula method	Lesson slides: Quadratic Equations II	Class	5 minutes
Apply and explore concepts	Discriminants	YoTeach: To ask students to give examples of quadratic equations with 0, 1 and 2 roots	Individuals	5 minutes
Introduce and discuss concepts	Discriminants	Lesson slides: Quadratic Equations II	Class	5 minutes

Apply and explore concepts	Quadratic formula method	Realtimeboard: To ask students to use Realtimeboard to solve quadratic equations with the method of the <i>quadratic formula</i>	Groups	10 minutes
Review concepts	Completing the square, quadratic formula and discriminant questions	Badaboom Quiz 2: To ask students to answer both conceptual questions and practical problems in Badaboom to check students' understanding	Groups	5 minutes
Self-reflect on lesson		YoTeach: Students to write or type what they have learnt	Individuals	5 minutes