

1. National Research Coordinator's Comments (English)

[00:00:00](#) This is a lesson on the square root of numbers. The main content covered is that for a positive number there are two square roots - one positive and one negative. The teacher stresses that for a negative square root, we need to write the negative sign in front of the radical, and for a positive root, we can either write the positive sign or no sign.

It is not clear whether the teacher's intention is to stress the concept of square roots (which should be already familiar to students at this level) or the notations and presentation. Except for one particular point in the lesson (which will be commented on at 00:26:32), the content covered in this lesson should prove to be easy for an average student in Hong Kong.

The amount of content covered in this lesson is less than the amount covered in a typical mathematics lesson in Hong Kong.

[00:00:21](#) This series of questions - starting with what is the square of three, and then at 00:01:46 what is the square of negative three - is leading to the idea of square root (at 00:03:55).

[00:04:40](#) After discussing the idea, the teacher now introduces the mathematical expression.

[00:05:14](#) Now the teacher introduces the terminology and the mathematical symbol for the concept of square root (although students should have learned this in lower grades). The meaning of the symbol is stressed immediately after its introduction.

[00:05:42](#) "To find a positive value" - here the word "positive" is crucial.

[00:08:12](#) This is a typical "funnel" approach, where students are "funneled" towards the conclusion.

[00:12:23](#) This series of questions and answers, starting from here, is a typical way of checking students' answers in Hong Kong.

[00:14:05](#) From here until 00:14:47 is a summary of the concepts covered so far.

[00:16:54](#) Asking students whether they have any questions after teaching a concept is very typical of Hong Kong teachers. And so is the lack of response from students. Usually, the teacher will quickly ask students to do some exercises, as in this case.

[00:19:45](#) Having some students do their classwork on the board is a very common practice in Hong Kong.

[00:22:27](#) "Square root of the square of negative four" is a very demanding question for Hong Kong students.

[00:26:32](#) This law of trichotomy is very rigorous reasoning for students of this level.

[00:28:32](#) Assigning reading for homework is not so common in Hong Kong.

[00:30:36](#) It is not clear why the teacher asks only "some" of the students (and not all) to do the practice exercises.