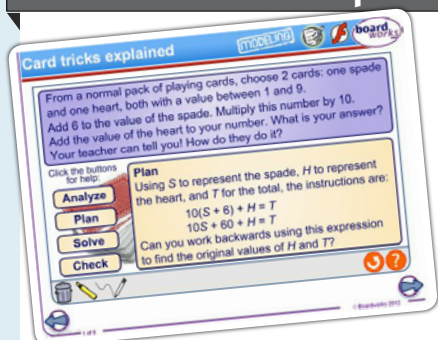


Our current Algebra product is currently being updated to meet the Common Core State Standards for Mathematics. These standards, as well as establishing the mathematical content which should be taught, also emphasize eight Standards for Mathematical Practice.

The example slides below show how we aim to help teachers to strengthen these skills in their students. All of the slides display the mathematical practices 'checklist' icon, which will be used throughout the Algebra product to highlight where these skills are being developed. A keen emphasis is placed upon modeling with mathematics; the slides containing examples of these real-life problems are marked with a 'modeling' stamp.



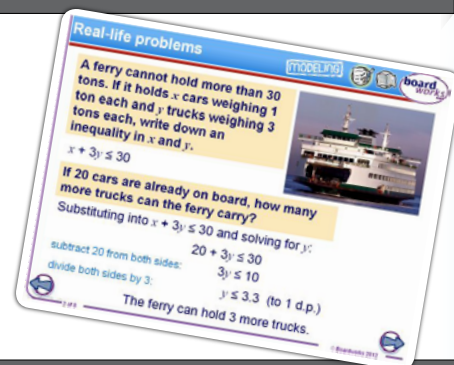
### 1. Make sense of problems and persevere in solving them



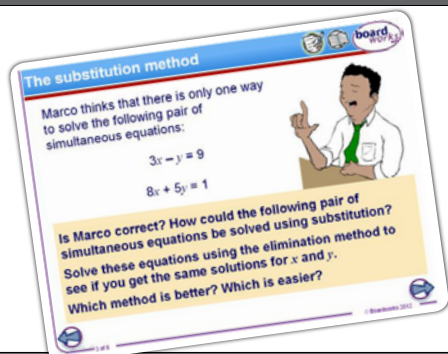
This activity teaches students to explain the meaning of a problem and look for entry points to its solution. They should be able to step back and analyze the card trick, then plan a solution pathway to find out how it is done. Students should work towards writing the trick in algebraic form and then manipulating the expression to solve the problem. The buttons at the side can be clicked for help with working through the problem logically.

### 2. Reason abstractly and quantitatively

This slide demonstrates how students should make sense of quantities and their relationships in problem situations. Students should be able to decontextualize - take a given situation and represent it symbolically; this skill is applied when writing the inequality in x and y. They should also be able to contextualize; put the symbols back into the context of the problem. Here, students should realize that the number of trucks (y) must be a positive integer and so round down their final answer.



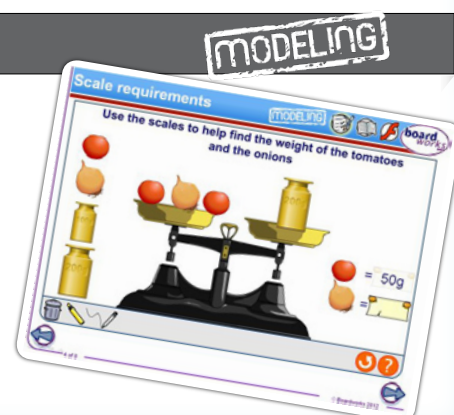
### 3. Construct viable arguments and critique the reasoning of others



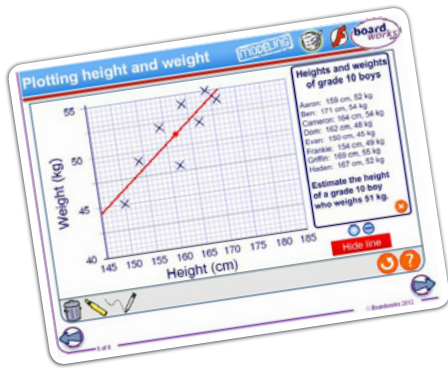
This slide demonstrates how students should use analyze situations, compare the effectiveness of two plausible arguments, and - if there is a flaw in an argument - explain what it is. Here they must critique Marco's conjecture and put forward their own opinion of how to solve the simultaneous equations. Students should always be encouraged to justify their conclusions.

### 4. Model with Mathematics

This activity demonstrates how students should apply the mathematics they know to solve problems arising in everyday life. They should learn to analyze relationships mathematically and interpret their results in the context of the situation. Here, students should drag objects to the scales to make them balance and realize that by writing simultaneous equations to describe this they can find the weight of one tomato and one onion.



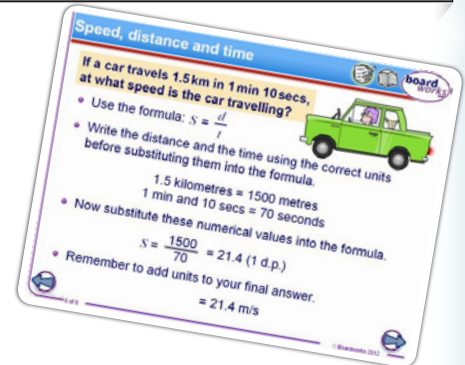
## 5. Use appropriate tools strategically



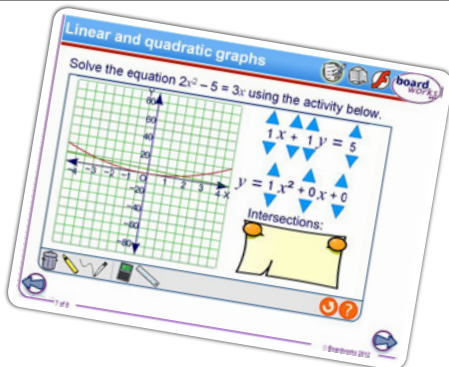
This activity allows students to plot points on a scatter graph then generate a line of best fit to help them answer the given question. Students should learn to use graphing software like this to help them solve problems. A variety of implements are also available in the toolbars at the bottom of activities to encourage students to consider the available tools when solving a mathematical problem. These tools might include a pen, a ruler, a protractor or a calculator.

## 6. Attend to precision

This slide demonstrates how students should try to communicate precisely to others. They should use clear definitions, state the meaning of the symbols they choose and be careful about specifying units of measure. They calculate accurately and efficiently and express numerical answers with a degree of precision appropriate for the problem context.



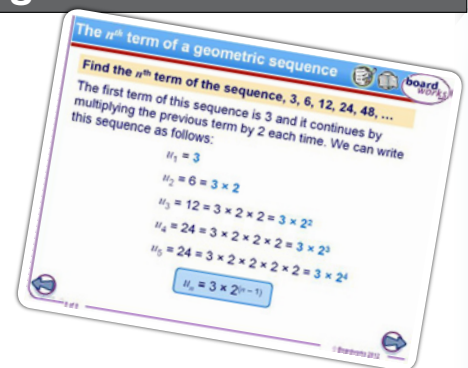
## 7. Look for and make use of structure



This activity demonstrates how students should look closely to discern a pattern or structure. They should see complicated things, such as tricky algebraic expressions, as single objects or as being composed of several objects, for example here where they should consider the functions either side of the equals signs separately and use the graphing activity to find their intersection.

## 8. Look for and express regularity in repeated reasoning

This slide demonstrates how students should notice if calculations are repeated, and look both for general methods and for shortcuts such as general formulas. Here, writing out the pattern of terms in the sequence should lead them to find the general nth term formula for the sequence.



## Why Boardworks will help ease the transition

The aim of the Common Core State Standards for Mathematics is to focus students' learning and discourage a 'mile wide and inch deep' learning approach. Rather than just learning enough to pass the next test or exam, students should fully grasp the underlying mathematical concepts and develop skills that will enable them to apply their knowledge to future learning. The Boardworks Algebra product targets the development of the eight Mathematical Practices which lead to a deeper, fuller understanding of the mathematical topics outlined in the Common Core Standards.

To find out more about how Boardworks can help ease the transition, visit [www.boardworkseducation.com/commoncore](http://www.boardworkseducation.com/commoncore) or call us on 855-405-7939.