

## Lesson 10: Trial and Improvement.

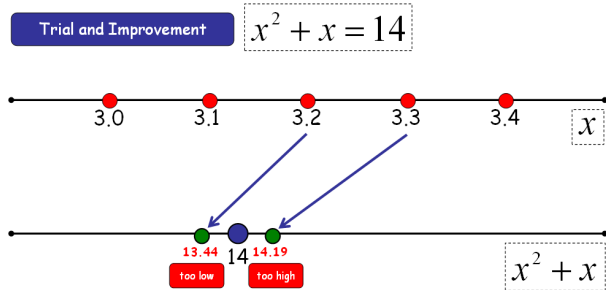
**Aim:** Solving equations using methods of trial and improvement.

Resources:

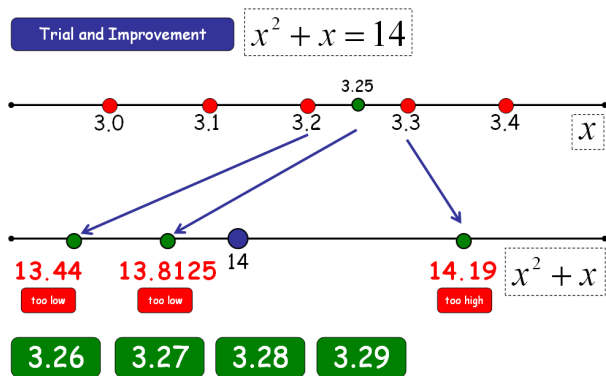
- Trial and improvement PowerPoint
- Trial and improvement worksheet

### Teacher-led activity (15 minutes)

Use the illustration to show that as the value of  $x$  changes it must, when  $f(x)$  is worked out, give some values lower and some values higher.

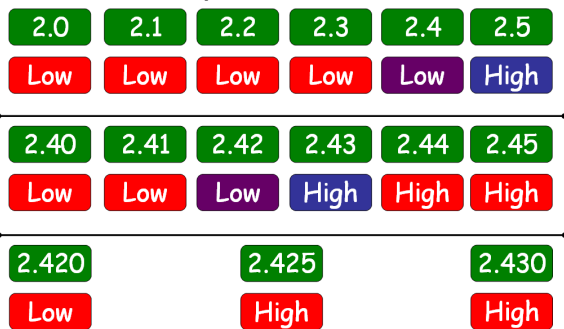


This illustrates that the solution is between 3.2 and 3.3. We must then bisect between 3.2 and 3.3.



So the solution is between 3.25 and 3.3, so for two decimal places this could be 3.26, 3.27, 3.28 and 3.29. All of these are 3.3 to one decimal place.

Use the next slide to demonstrate that a similar method can be used to get a solution to two-decimal places:



### Trial and Improvement worksheet (30 minutes)

Students to work through the two examples and then attempt the questions.