

Algebra – Trial and improvement

Use a table to help you find the value of the equation

Solve the equation
 $x^3 - 2x^2 = 12$

Find two integer values for x one that is too high and one that is too low

x	x^3	$2x^2$	$x^3 - 2x^2$	H/L
3	27	18	9	L
4	64	32	32	H

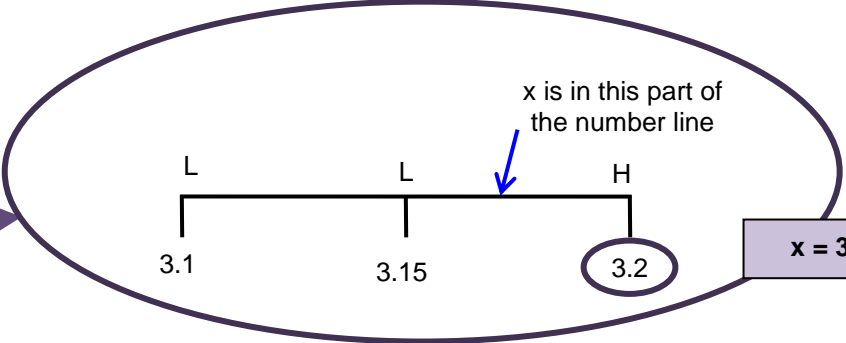
- Test the half-way value for x
 - If the half-way value is too high go down in 0.1's
 - If the half-way value is too low go up in 0.1's
- When you find two values either side of the answer, test half-way

x	x^3	$2x^2$	$x^3 - 2x^2$	H/L
3	27	18	9	L
4	64	32	32	H
3.5	42.875	24.5	18.375	H
3.1	29.791	19.22	10.571	L
3.2	32.768	20.48	12.288	H
3.15	31.255875	19.845	11.410875	L

Too low

Too high

A number line can help you get the right x value



x = 3.2 (1dp)