

## How to ...

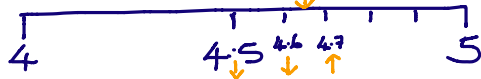
The equation

$$x^3 + 2x = 110$$

has a solution between 4 and 5. Use a trial and improvement method to find this solution.

Give your answer correct to 1 decimal place. You must show **all** your working

ONE MORE TRIAL!



$x$	$x^3 + 2x = 110$	Comment
4.5	$4.5^3 + 2 \times 4.5 = 100.125 \dots$	Too small
4.7	$4.7^3 + 2 \times 4.7 = 113.223 \dots$	Too large
4.6	$4.6^3 + 2 \times 4.6 = 106.536 \dots$	too small
4.65	$4.65^3 + 2 \times 4.65 = 109.844625$	too small so use largest of our choice! (4)

which one?

$x = 4.7$

Now have a go yourself ...

**Q1.** The equation  $x^3 + 3x = 41$  has a solution between 3 and 4. Use a trial and improvement method to find this solution. Give your answer correct to one decimal place. You must show **all** your working.

**Q2.** Use trial and improvement to solve this problem.

$$x^3 - 2x = 7$$

Give your answer to 1 decimal place. Show all your trials and their outcomes.

**Q3.** The equation  $2x^2 + x = 7$  has a solution between  $x = 1$  and  $x = 2$ . Use trial and improvement to find this solution correct to 1 decimal place.

## Exam Questions

**Q1.** Show that the equation  $x^3 + 3x - 7 = 0$  has a solution between  $x = 1$  and  $x = 2$ .

Using trial and improvement, find this solution correct to 1 decimal place. Show all your trials and their outcomes.

**Q2.** The equation  $x^3 - 6x = 72$  has a solution between 4 and 5. Use a trial and improvement method to find this solution.

Give your answer correct to one decimal place.

You must show **all** your working.

**Q3.** The equation

$$x^3 - 3x = 15$$

has a solution between 2 and 3. Use a trial and improvement method to find this solution.

Give your answer correct to 1 decimal place. You must show **all** your working

## Ready to be marked ?

### Checklist



Answers checked

“one more” trial completed



### Keywords

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### Things to remember ...

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### What went well ...

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### Teacher comment ..