

Year 9T Homework – Half Term 1

Homework 1 – Due: _____

Make sure you log on to HegartyMaths for help if you need it.

Trial and Improvement (321)

Using trial and improvement, find the solution between 1 and 2 for the following equation. Give your answer rounded to 1 DP.

$$x^3 + 5x^2 = 8$$

Percentage Increase/Decrease (90)

Decrease £843 by 91%
Give your answer rounded to 2 DP.

Sharing in a Ratio (332)

Paul, Colin and Brian are waiters. One night the restaurant earns tips totaling £78.40. They share the tips in the ratio 2:5:1. How much more does Colin get over Paul?

Index Notation (105)

Simplify $9^4 \times 5^2 \times 9^3 \times 5^3 \times 9^2$
leaving your answer in index form.

Homework 2 – Due: _____

Log onto HegartyMaths to watch the video and complete the quiz online. **Topic:** _____

My score was: _____

Homework 3 – Due: _____

Make sure you log on to HegartyMaths for help if you need it.

Trial and Improvement (321)

Using trial and improvement, find the solution between 1 and 2 for the following equation. Give your answer rounded to 1 DP.

$$x^3 + 2x^2 - 5x + 5 = 9$$

Index Notation (106)

Write as a single power of 9.

$$\frac{9^8 \times 9^{-5}}{9^{-6}}$$

Percentage Increase/Decrease (90)

Decrease £15890.23 by 16.5%
Give your answer rounded to 2 DP.

Volume/Surface Area of Cuboids (569)

The volume of a cuboid is 594cm^3 .
The length is 9cm and the width is 60mm.
Work out the height of the cuboid in cm.

Homework 4 – Due: _____

Log onto HegartyMaths to watch the video and complete the quiz online. **Topic:** _____

My score was: _____

Homework 5 – Due: _____

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Sharing in a Ratio (333)

Bridget, Jim and Krutika share some sweets in the ratio 2:3:3. Bridget gets 22 sweets. How many more sweets does Jim get over Bridget?

Index Notation (106)

Write as a single power of 12.

$$\frac{12^2 \times 12^9}{12^{-2}}$$

Special Sequences (263)

Consider the Fibonacci sequence below. Which is the first term in the sequence to exceed 240? 1,1,2,3,5,8,...

Volume/Surface Area of Cuboids (569)

The volume of a cuboid is 66cm^3 .
The length is 11cm and the width is 20mm.
Work out the height of the cuboid in cm.

Homework 6 – Due: _____

Log onto HegartyMaths to watch the video and complete the quiz online. **Topic:** _____

My score was: _____

Extension

Have you finished? Are you finding it too easy?

Go to <https://parallel.org.uk/> and look at the puzzles for your year group on the left. Show your answers on this page.