WCSA

Mathematics

Home Learning Book – Learning Cycle 4

Mathematics Year 9 Set 5 & 6

Name: _____ Tutor Group: ___

Maths Teacher(s): _____

Learning Cycle 4

May 2019	6	7	8	9	10	Teaching week 1
	13	14	15	16	17	Teaching week 2
	20	21	22	23	24	Teaching week 3
	27	28	29	30	31	Half Term
June 2019	3	4	5	6	7	Teaching week 4
	10	11	12	13	14	Teaching week 5
	17	18	19	20	21	Teaching week 6
	24	25	26	27	28	Assessment week
July 2019	1	2	3	4	5	Super Teaching week

- During the Assessment Week (week 8), Year 9 students will sit their first GCSE style paper. This will cover a wide range of topics that have been covered across the year. Year 10 students will sit a full set of GCSE papers. Revision lists can be found later in this booklet.

- The questions in this homework booklet are mainly consolidation of work covered in previous years and of key skills. However, if there are any topics that students do not understand then there are Hegarty Maths video clips to watch that explain that topic. Please see the opposite page for further information.

- In week 7 teachers will be checking that all 4 Hegarty Maths revision templates have been completed. The idea is that these are completed throughout the cycle and not all left until week 7. Please see the 'Revision Guide' document to inform what topics should be covered as part of this revision.

- Alongside completing the tasks in this booklet we also expect students to be making regular use of the Hegarty Maths website for independent study.

  This can be to go over things covered in class, to revise for upcoming tests or to work on areas of weakness that were identified in previous tests.

REMEMBER: THERE WILL BE 4 HEGARTY MATHS REVISION PAGES CHECKED IN WEEK 7.

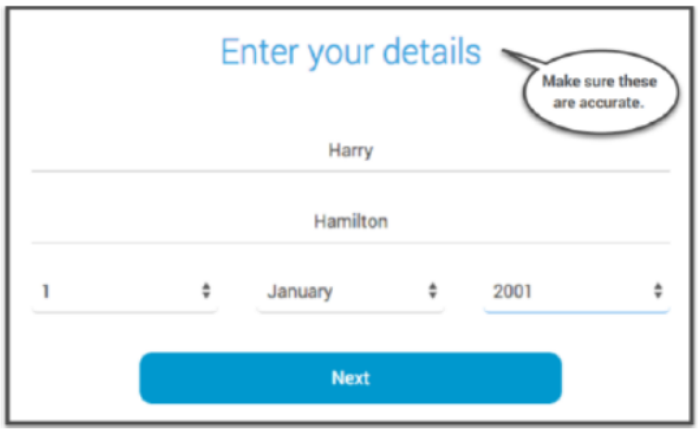
THESE MUST **ALL** BE COMPLETED AND THE ONLINE QUIZZES MUST ALSO BE COMPLETE.

Cycle 4 Homework Help

Please use the clip numbers in the table below to look up areas of weakness on the Hegarty Maths website.

Question	Topic	Hegarty Maths number
1, 2	Finding the lowest common multiple	34, 35, 36
3, 4	BIDMAS	24, 44, 120, 150
5, 6	Dividing 3 and 2 digit numbers by a 1 digit number	22
7, 8	Continuing a sequence	919
9, 10	Calculating 10%, 5%, 20% of a quantity	84, 85
11, 12	Identifying place value in numbers	13
13, 14	Changing improper fractions to mixed numbers	63, 64
15, 16	Simplifying a ratio	329
17, 18	Multiplying by 10, 100, 1000	15
19, 20	Comparing fractions	60

To log in to Hegarty Maths, go to https://hegartymaths.com/ and select 'Student Log in'.



Teachers do not have access to student passwords. If you forget your password please click on 'request a password reset' and speak to your teacher during your next lesson.

Name :

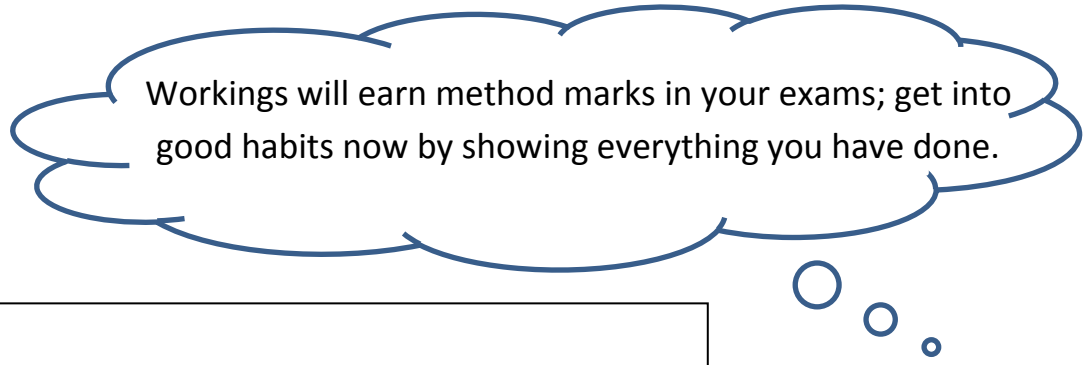
64.1

Question 1 Find the lowest common multiple of 70 and 30	**Question 2** Find the lowest common multiple of 55 and 66	**Question 3** 7 × 5 - 3	**Question 4** 2 × (12 - 6)
Question 5 Work out 162 ÷ 9 =	**Question 6** Work out 492 ÷ 6 =	**Question 7** Find the next 2 terms in the sequence 41, 38, 35, 32,….	**Question 8** Find the next 2 terms in the sequence 42, 37, 32, 27,….
Question 9 Find 20% of £340	**Question 10** Find 5% of £360	**Question 11** Write down the value of the figure 4 in 41068	**Question 12** Write down the value of the figure 7 in 75064
Question 13 Express as a mixed number $\frac{7}{5}$	**Question 14** Express as a mixed number $\frac{17}{4}$	**Question 15** Simplify 44 : 4	**Question 16** Simplify 35 : 55
Question 17 Work out 331 × 1000 =	**Question 18** Work out 40.6 × 10 =	**Question 19** Complete using < = or > $\frac{6}{7}$ $\frac{3}{4}$	**Question 20** Complete using < = or > $\frac{8}{10}$ $\frac{6}{8}$

SKILLS CHECK

Score

You must show your workings here:



Parent/Carer Comment:

Name :

64.2

Question 1 Find the lowest common multiple of 36 and 45	**Question 2** Find the lowest common multiple of 21 and 28	**Question 3** $8 \times 5 - 4$	**Question 4** $6 \times (5 + 4)$
Question 5 Work out $74 \div 2 =$	**Question 6** Work out $560 \div 7 =$	**Question 7** Find the next 2 terms in the sequence 16, 21, 26, 31,….	**Question 8** Find the next 2 terms in the sequence 45, 41, 37, 33,….
Question 9 Find 5% of £640	**Question 10** Find 10% of £180	**Question 11** Write down the value of the figure 8 in 81042	**Question 12** Write down the value of the figure 4 in 39467
Question 13 Express as a mixed number $\frac{20}{7}$	**Question 14** Express as a mixed number $\frac{3}{2}$	**Question 15** Simplify 8 : 40	**Question 16** Simplify 110 : 130
Question 17 Work out $748 \times 1000 =$	**Question 18** Work out $8.8 \times 10 =$	**Question 19** Complete using < = or > $\frac{3}{4} \quad \frac{1}{3}$	**Question 20** Complete using < = or > $\frac{3}{5} \quad \frac{1}{2}$

SKILLS CHECK

Score

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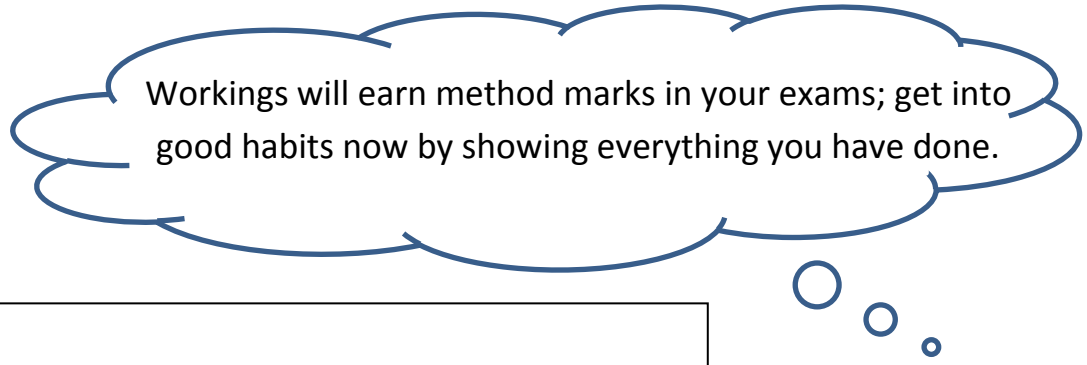


Parent/Carer Comment:

Name :

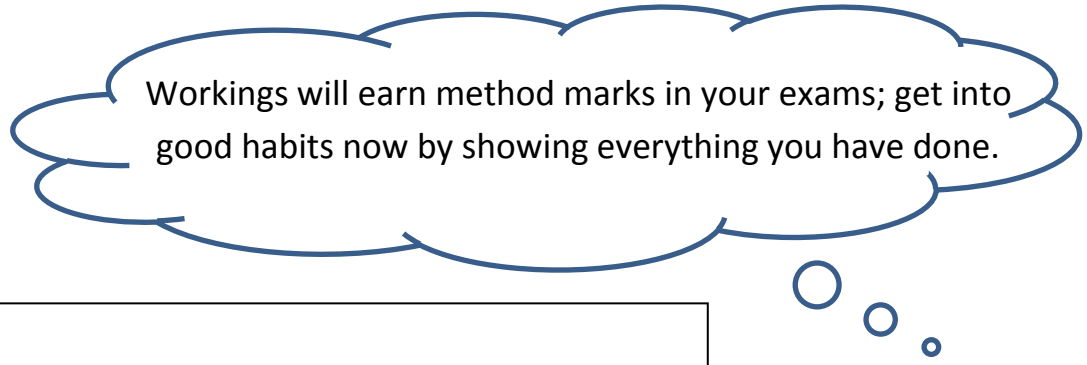
64.3

Question 1 Find the lowest common multiple of 77 and 33	**Question 2** Find the lowest common multiple of 49 and 42	**Question 3** 20 - 2 × 3	**Question 4** 10 × (2 + 3)
Question 5 Work out 104 ÷ 8 =	**Question 6** Work out 792 ÷ 9 =	**Question 7** Find the next 2 terms in the sequence 46, 43, 40, 37,….	**Question 8** Find the next 2 terms in the sequence 20, 25, 30, 35,….
Question 9 Find 20% of £40	**Question 10** Find 10% of £220	**Question 11** Write down the value of the figure 9 in 59200	**Question 12** Write down the value of the figure 6 in 86709
Question 13 Express as a mixed number $\frac{8}{3}$	**Question 14** Express as a mixed number $\frac{7}{5}$	**Question 15** Simplify 55 : 25	**Question 16** Simplify 16 : 8
Question 17 Work out 178 × 10 =	**Question 18** Work out 6.6 × 1000 =	**Question 19** Complete using < = or > $\frac{2}{3}$ $\frac{1}{2}$	**Question 20** Complete using < = or > $\frac{4}{6}$ $\frac{2}{3}$

SKILLS CHECK

Score

You must show your workings here:



Parent/Carer Comment:

Name :

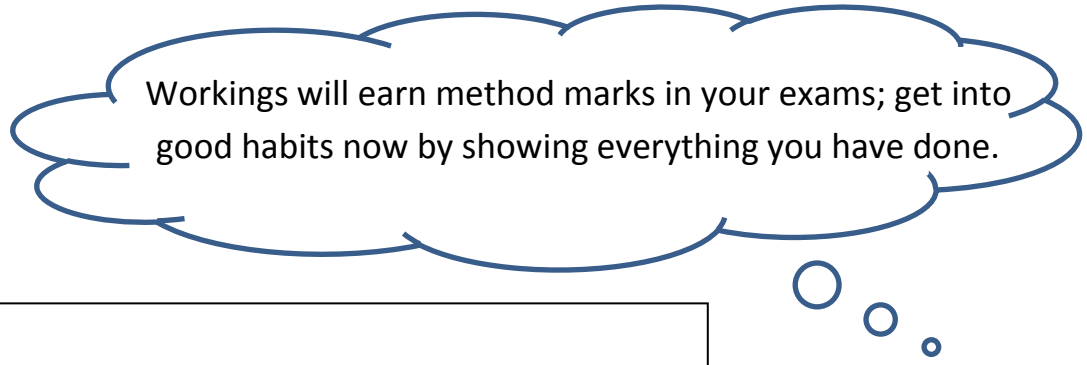
64.4

Question 1 Find the lowest common multiple of 24 and 16	**Question 2** Find the lowest common multiple of 16 and 48	**Question 3** 4 + 2 × 4	**Question 4** 9 × (5 + 3)
Question 5 Work out 297 ÷ 9 =	**Question 6** Work out 420 ÷ 5 =	**Question 7** Find the next 2 terms in the sequence 16, 24, 32, 40,….	**Question 8** Find the next 2 terms in the sequence 37, 32, 27, 22,….
Question 9 Find 20% of £240	**Question 10** Find 10% of £760	**Question 11** Write down the value of the figure 1 in 61800	**Question 12** Write down the value of the figure 8 in 86902
Question 13 Express as a mixed number $\frac{7}{5}$	**Question 14** Express as a mixed number $\frac{17}{4}$	**Question 15** Simplify 11 : 55	**Question 16** Simplify 6 : 66
Question 17 Work out 7 × 10 =	**Question 18** Work out 39.9 × 1000 =	**Question 19** Complete using < = or > $\frac{3}{5}$ $\frac{1}{2}$	**Question 20** Complete using < = or > $\frac{6}{9}$ $\frac{1}{3}$

SKILLS CHECK

Score

You must show your workings here:



Parent/Carer Comment:

Name :

64.5

Question 1 Find the lowest common multiple of 21 and 28	**Question 2** Find the lowest common multiple of 6 and 10	**Question 3** 7 + 6 × 2	**Question 4** 6 × 4 - 4
Question 5 Work out 78 ÷ 6 =	**Question 6** Work out 516 ÷ 6 =	**Question 7** Find the next 2 terms in the sequence 14, 17, 20, 23,….	**Question 8** Find the next 2 terms in the sequence 11, 13, 15, 17,….
Question 9 Find 10% of £840	**Question 10** Find 10% of £580	**Question 11** Write down the value of the figure 2 in 42965	**Question 12** Write down the value of the figure 6 in 57600
Question 13 Express as a mixed number $\frac{9}{5}$	**Question 14** Express as a mixed number $\frac{11}{3}$	**Question 15** Simplify 9 : 18	**Question 16** Simplify 8 : 44
Question 17 Work out 16 × 100 =	**Question 18** Work out 6.4 × 10 =	**Question 19** Complete using < = or > $\frac{3}{9}$ $\frac{2}{4}$	**Question 20** Complete using < = or > $\frac{7}{8}$ $\frac{4}{6}$

SKILLS CHECK

Score

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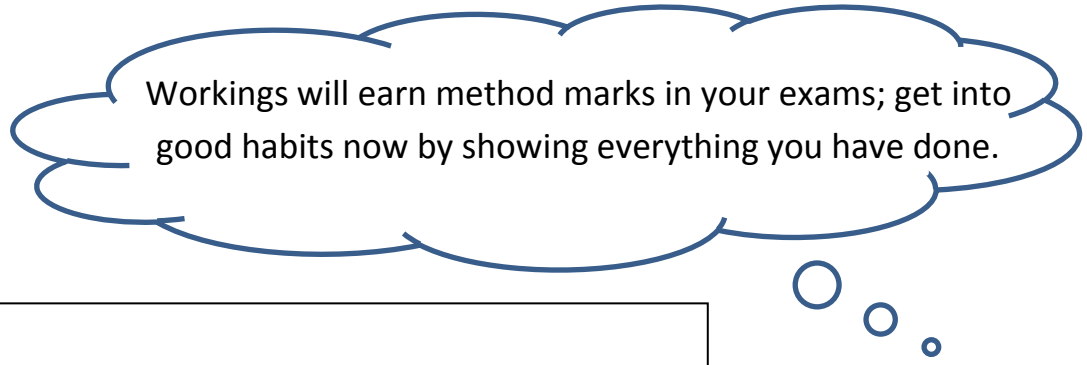

Parent/Carer Comment:

Name :

64.6

Question 1 Find the lowest common multiple of 30 and 40	**Question 2** Find the lowest common multiple of 80 and 60	**Question 3** 6 + 12 × 2	**Question 4** 20 - 7 × 5
Question 5 Work out 84 ÷ 7 =	**Question 6** Work out 48 ÷ 4 =	**Question 7** Find the next 2 terms in the sequence 41, 37, 33, 29,….	**Question 8** Find the next 2 terms in the sequence 43, 40, 37, 34,….
Question 9 Find 20% of £80	**Question 10** Find 20% of £200	**Question 11** Write down the value of the figure 1 in 76108	**Question 12** Write down the value of the figure 3 in 63091
Question 13 Express as a mixed number $\frac{9}{7}$	**Question 14** Express as a mixed number $\frac{5}{4}$	**Question 15** Simplify 63 : 9	**Question 16** Simplify 6 : 15
Question 17 Work out 662 × 1000 =	**Question 18** Work out 1.2 × 10 =	**Question 19** Complete using < = or > $\frac{4}{9}$ $\frac{4}{8}$	**Question 20** Complete using < = or > $\frac{1}{3}$ $\frac{1}{2}$

SKILLS CHECK

Score

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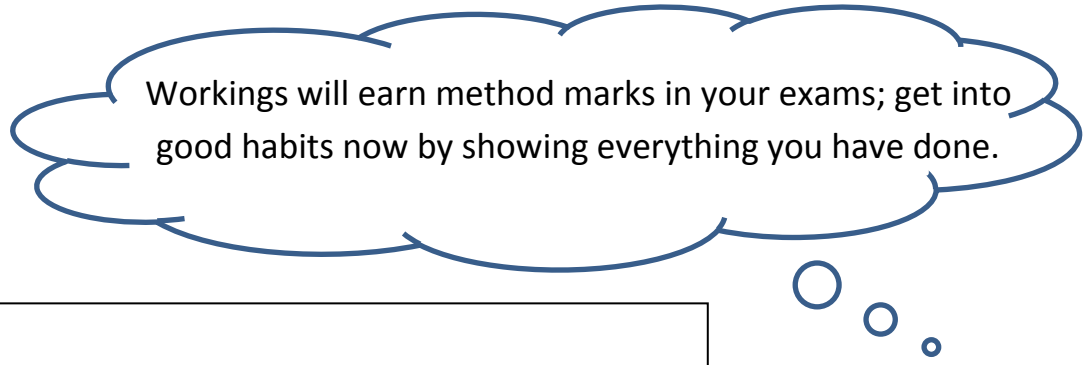


Parent/Carer Comment:

Revision – Week 7

In Week 7 we will collect 4 pages of revision.
These can be completed at any time during the cycle, but they will all be checked in Week 7.
Please plan your time carefully so that you meet this deadline.

You should choose topics from the list opposite which details what has been covered during this cycle.

Getting into good revision habits is vital for success in GCSE maths.

Revision is most effective when it involves 'doing' – this approach is proven to aid retention and recall of information. This is why we are asking that you;

- Take notes from the videos on Hegarty Maths, writing down key information and examples.

- Write down your workings out for each quiz that you complete and mark this as you go, noting corrections for any questions that you got wrong.

- Record your quiz score and rate your confidence level.

YOU MUST COMPLETE THE ONLINE QUIZ!

If you can make the above a habit revision will be much easier for you when you are preparing for exams. We have provided an example of what good revision looks like.

Hegarty Maths also tracks everything that you do, so if you complete lots of revision from Y7 then by the time you get to Y11 it will be able to tell you your weaknesses; these can then form a big part of your final revision plan. The 'Fix Up 5' feature will give you questions and support on these.

As ever, if you have any questions please see your teacher well before the deadline.

Year 9 Cycle 4 Test Revision List - Main Paper

Topic	HM
Place value	13-14
Simplifying expressions	156-157
Rounding to 1 significant figure	130
Bar charts	425
Ordering fractions	60
Tally charts	401
Pictograms	426
Fraction of an amount	77
Probability	353
Multiples, squares and primes	33, 99, 28
Angle facts	479
Forming equations	176
Best value	763-772
Conversion graphs	712-713
Use of a calculator	129
Converting currency	707-708
Factorising	168-169
Standard form	122-126
Percentages	87
Ratio	332-334
Expectation	355
Plans and elevations	837-844
Polygons	561-564
Reciprocal graphs	300-301
Compound interest	94
Error intervals	137
Solving quadratic equations	230
nth term of a sequence	198, 249

Hegarty Maths Revision

Topic: 30 : Prime Factorisation 2	Have you checked through the required 'Building Blocks'? ☑ 29

Notes from the video:

Any composite number can be uniquely expressed as a product of primes.

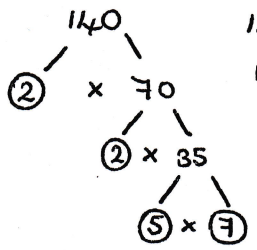
Product means times / multiply.

Prime numbers 2, 3, 5, 7, 11, 13, 17, 19, ...

Divisibility tests

Divisible by 2	number ends in 0, 2, 4, 6, 8
Divisible by 3	sum of digits is divisible by 3
Divisible by 5	ends in 0, 5

Write 140 as a product of primes



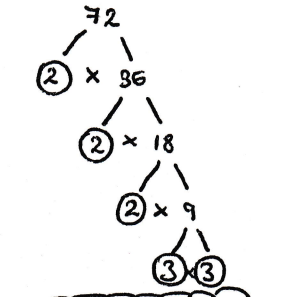
$140 = 2 \times 2 \times 5 \times 7$

in index form

$140 = 2^2 \times 5 \times 7$

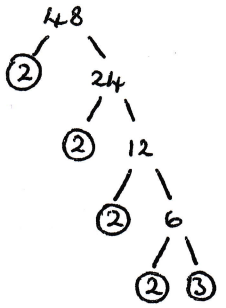
Quiz questions (showing workings and marking work as you go):

1. $125 = 5^3$ ✓
2. $81 = 3^4$ ✓
3. $72 = 2^3 \times 3^2$ ✓

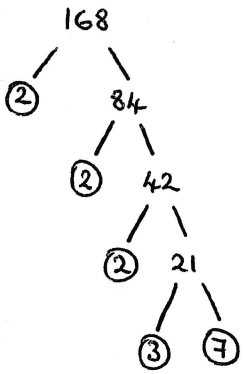


Use X on online keyboard not letter x

4. $200 = 2^3 \times 5^2$ ✓
5. $24 = 2^3 \times 3$ ✓
6. $12 = 2^2 \times 3$ ✓
7. $20 = 2^2 \times 5$ ✓
8. $48 = 2^4 \times 3$ ✓



9. $168 = 2^3 \times 3 \times 7$ ✓
10. $36 = 2^2 \times 3^2$ ✓



Quiz score: 100 %	My confidence level: ☺ 😐 ☹

Hegarty Maths Revision

Checklist: *1. Watched video and taken notes; 2. Completed the quiz, writing down your workings and score; 3. Completed the 'My confidence level' section.*

Topic:	Have you checked through the required 'Building Blocks'? ☐
Notes from the video:	
Quiz questions (showing workings and marking work as you go): You MUST have completed the quiz online as well.	
Quiz score: %	My confidence level: ☺ 😐 ☹

Remember to see your teacher if you have watched the video on Hegarty Maths and still do not understand.

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