

MATHEMATICS HOMEWORK BOOKLET

Benjamin Britten Academy of Music and Mathematics

Year 7 Book C
AUTUMN TERM



NAME:



Mathematics homework

Contents

How does it work?

- One homework will be set a week
- The due date for each homework will be written on this page
 - Some homework will need completing on this booklet, others on the internet
- If you need help logging onto mathswatch, you need to see your class teacher
 - If you need help with the homework task, you must peak to your teacher before the due date
- The school runs a homework club. Speak to your teacher to find out which day.
- If you lose your booklet a copy can be found on your class google classroom or on the schools website.
 - Your teacher will give you information on where to find the answers.

WEEK	Numeracy	Due
1	NUMERACY	
2	ODD AND EVEN	
3	RESEARCH TASK	
4	MATHSWATCH	
5	SEQUENCES	
6	SUBSTITUTION	
7	MATHSWATCH	
8	RESEARCH TASK	
9	NUMERACY	
10	MATHSWATCH	
11	PERIMETER	
12	NUMERACY	
13	ANALOGUE CLOCK	
14	MATHSWATCH	

Completing your homework

All homework tasks need to be completed in this booklet or on a specific website.

There are also **answers** for all booklet tasks. Your teacher will either upload these to your class google classroom and expect you to mark it in class. Speak to your teacher if you are unsure.

Remember - if you need help, you must speak to your teacher **before** the due date.

Login details

Below are the log in instructions you will need in order to access and complete some of the homework tasks in this booklet.

If you have any issues logging in, you **must** speak to your teacher as soon as possible.

To log in, all students should use the **Single Sign-on service** through either Google or Microsoft. Click either the Google or Microsoft buttons (see below) and then enter your school email address and school computer login password.

e.g. 25bloggsj@benjaminbritten.school and password which could be: BlueCat123 (example)



If you see the logo above next to a task, you can type the clip number into Mathswatch for extra help!

Watch the video and make notes, then try the homework task again. If you still need help, then speak to your maths teacher at school.



Homework 1: Numeracy

MENTAL STRATEGIES -
do these in your head

TIMESTABLES -
do these in your head

Literacy challenge: Missing vowels!

Below are 3 keywords in maths, but the vowels are missing. Can you fill the blanks?

_ DD _ T _ _ N

M _ LT _ PL _ C _ T _ _ N

_ R _ THM _ T _ C

×	3	5	2	4	6
4					
2					
6					
3					
5					

Written methods: addition

Column addition

Numbers can be added together using the column method. This involves writing one number underneath the other.

Example

What is $343 + 315$?

$$\begin{array}{r} 343 \\ + 315 \\ \hline 658 \end{array}$$

50 Thousand + 8,654

$$\begin{array}{r} = 50\,000 \\ + 8\,654 \\ \hline 58\,654 \end{array}$$

Complete out these column additions

1)
$$\begin{array}{r} 13 \\ + 14 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 13 \\ + 15 \\ \hline \end{array}$$

1)
$$\begin{array}{r} 18 \\ + 14 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 17 \\ + 17 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 30 \\ + 21 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 40 \\ + 22 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 35 \\ + 25 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 45 \\ + 26 \\ \hline \end{array}$$

$$\begin{array}{r}
 1) \quad 2607 \\
 + 1328 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 2) \quad 5286 \\
 + 505 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 3) \quad 2305 \\
 + 3523 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 4) \quad 6817 \\
 + 1320 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 5) \quad 2582 \\
 + 2173 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 6) \quad 4438 \\
 + 3121 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 7) \quad 7653 \\
 + 273 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 8) \quad 1914 \\
 + 359 \\
 \hline
 \end{array}$$

Fill in the missing digits in these addition sums.

$$\begin{array}{r}
 1) \quad 5_ \\
 + 73 \\
 \hline
 1_5
 \end{array}
 \quad
 \begin{array}{r}
 2) \quad 58 \\
 + _6 \\
 \hline
 9_
 \end{array}
 \quad
 \begin{array}{r}
 3) \quad 84 \\
 + 5_ \\
 \hline
 1_9
 \end{array}
 \quad
 \begin{array}{r}
 4) \quad _8 \\
 + 85 \\
 \hline
 4
 \end{array}$$

Which of the following is the correct calculation of $3847 - 554$?

$$\begin{array}{r}
 \text{a)} \quad 3847 \\
 554 - \\
 \hline
 2307
 \end{array}
 \quad
 \begin{array}{r}
 \text{b)} \quad 3847 \\
 554 - \\
 \hline
 3313
 \end{array}
 \quad
 \begin{array}{r}
 \text{c)} \quad 3847 \\
 554 - \\
 \hline
 -2307
 \end{array}
 \quad
 \begin{array}{r}
 \text{d)} \quad 3847 \\
 554 - \\
 \hline
 3293
 \end{array}$$

$$\begin{array}{r}
 1) \quad 25 \\
 - 14 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 2) \quad 34 \\
 - 11 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 3) \quad 34 \\
 - 16 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 4) \quad 43 \\
 - 39 \\
 \hline
 \end{array}$$

subtraction missing digit puzzles

$$\begin{array}{r}
 1 \quad 8 \quad 2 \quad 2 \\
 2 \quad \square \quad 4 - \\
 \hline
 \square \quad \square \quad 1 \quad \square
 \end{array}$$

$$\begin{array}{r}
 4 \quad 1 \quad 2 \quad \square \\
 \square \quad \square \quad 2 - \\
 \hline
 \square \quad 4 \quad 2 \quad 7
 \end{array}$$

$$\begin{array}{r}
 6 \quad \square \quad 4 \quad \square \\
 2 \quad 2 \quad 2 - \\
 \hline
 6 \quad 3 \quad \square \quad 8
 \end{array}$$

$$\begin{array}{r}
 2 \quad \square \quad 3 \quad \square \\
 2 \quad 5 \quad 6 - \\
 \hline
 2 \quad 0 \quad \square \quad 9
 \end{array}$$



Homework 2: Odd and Even numbers

If even numbers always end with a 0,2,4,6,8 what digits do odd numbers always end in _____

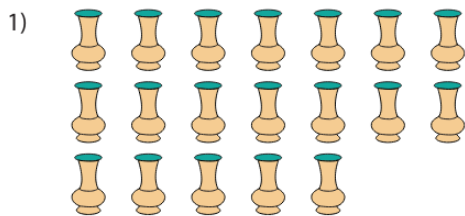
List the first 10 even numbers: _____

List the first 10 odd numbers: _____

Circle all the even numbers in the grid below.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Count the pictures. Classify the total as odd or even.



_____ vases

odd / even



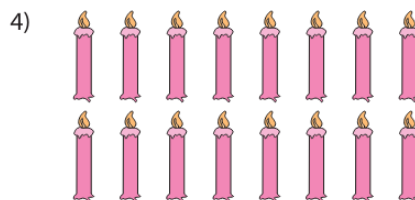
_____ nail polishes

odd / even



_____ strawberries

odd / even



_____ candles

odd / even

1. Which of the following numbers are **even**? Choose all that apply.

4	7	12	25	28	116	390	6489
---	---	----	----	----	-----	-----	------

2. Which of the following numbers are **odd**? Choose all that apply.

1	6	18	49	76	243	885	2007
---	---	----	----	----	-----	-----	------

3. List all of the even numbers between 15 and 25.

4. a) What is the 3rd odd number? b) What is the 5th even number?
c) What is the 8th even number? d) What is the 10th odd number?

5. Which type of number does **not** divide exactly by 2?

CHALLENGE 1

- I am greater than 200.
- I am even.
- I am a multiple of 5.

Who am I? _____

A 526	B 713	C 92	D 107
E 274	F 810	G 625	H 321

CHALLENGE 2

- I am an odd number.
- I am less than 800.
- The total of all my digits is also odd.
- I am not a multiple of 5.

Who am I? _____

A 526	B 713	C 92	D 107
E 274	F 810	G 625	H 321

CHALLENGE 1

- I am less than 900.
- I am a 3-digit number.
- I am odd.
- The total of all my digits is also odd.

Who am I? _____

A 509	B 280	C 465	D 258
E 87	F 833	G 912	H 314

CHALLENGE 2

- I am greater than 250.
- My hundreds digit is less than 8.
- I am an even number.
- My smallest digit is my tens digit.

Who am I? _____

A 509	B 280	C 465	D 258
E 87	F 833	G 912	H 314

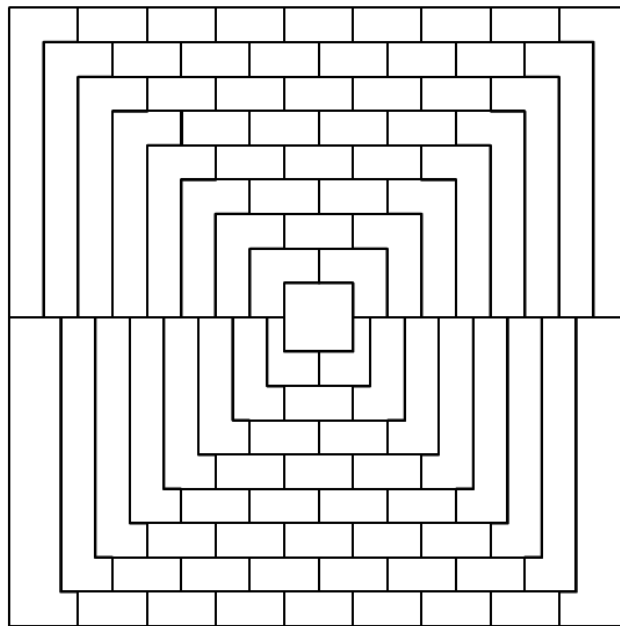


Homework 3: Research Task

Four colour Theorem

Part A

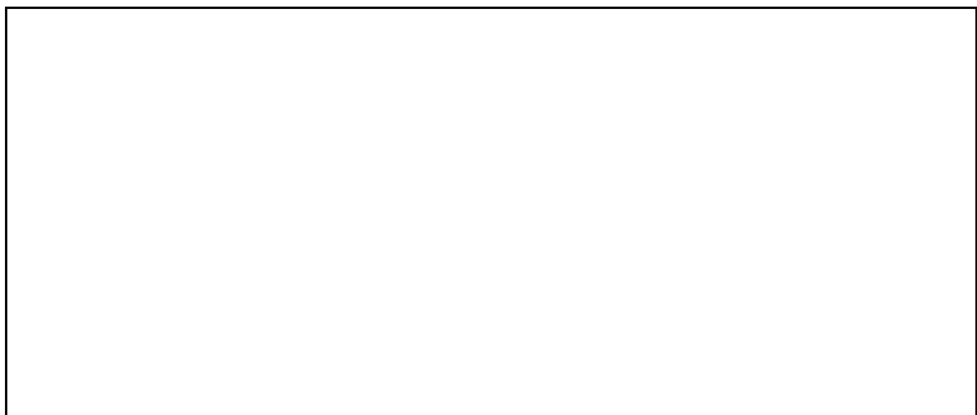
Colour in the pattern so that no areas which touch have the same colour. Try to use the least number of different colours possible.



What is the least number of different colours that are needed?

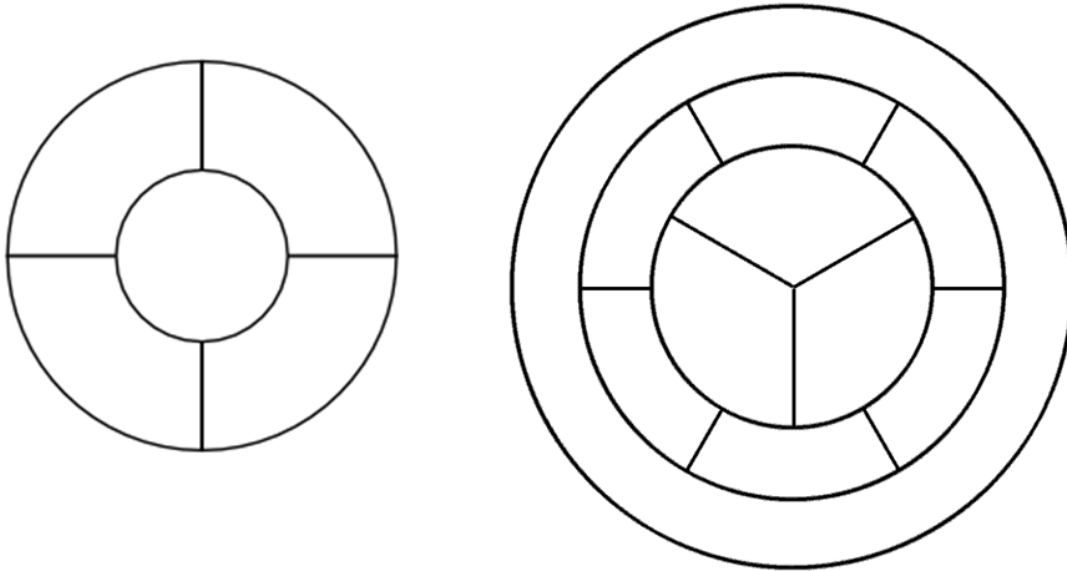
Part B

Now make your own pattern using the same rule (you can't have the same colours next to each other). Try to make a pattern which needs the greatest number of different colours.



What is the greatest number of different colours that are needed?

How many colours do you need to colour the two pictures below so that no two touching parts are the same colour? Use your own colours to test it out. Try to use the minimum number of colours possible.



Thanks to the Four Colour Theorem, we know that any picture of this kind only requires four different colours (to have no touching parts be the same colour).

RESEARCH: Use the internet or books to answer the following questions.

Q1 a) What is cartography?

b) How does the Four Colour Theorem link to cartography?

Q2 Why do some people believe that the Four Colour Theorem has not been proven properly?

Q3 Who famously thought he had proved the Four Colour Theorem but found out ten years later that he had made a mistake?



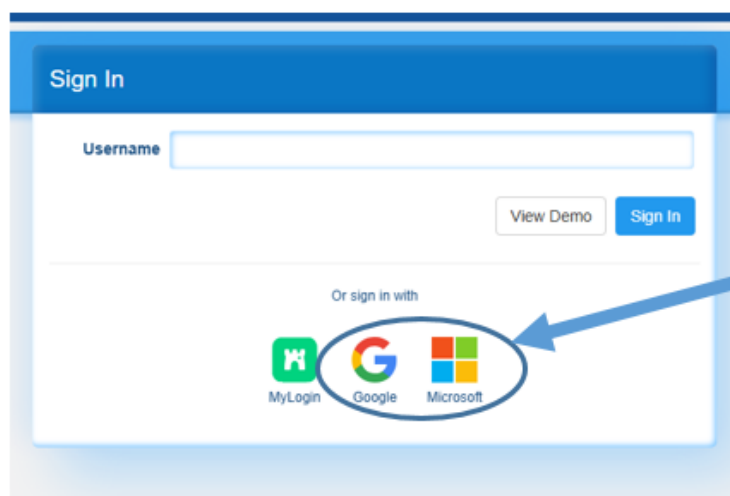
Homework 4:

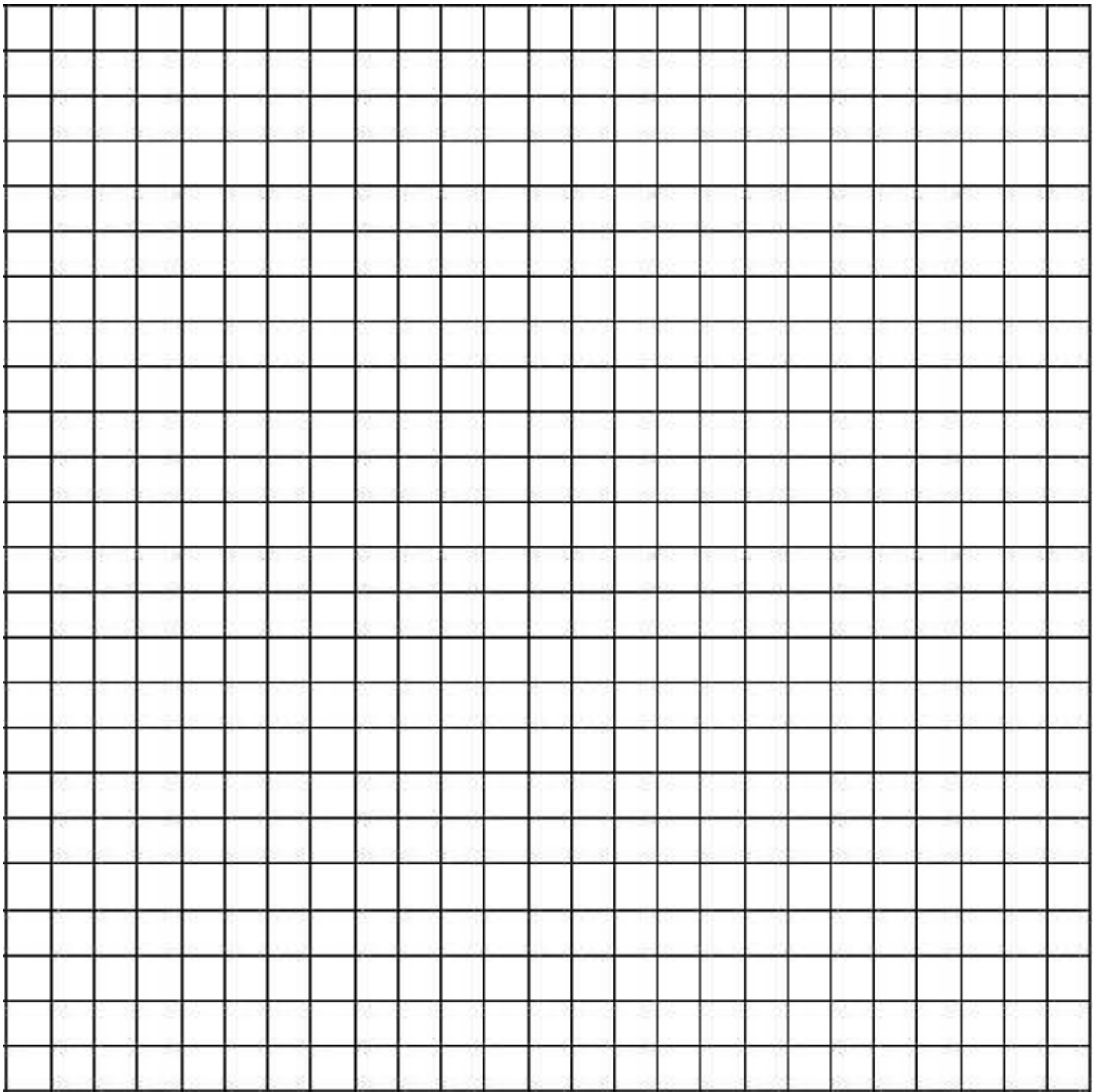


For this week's homework, your teacher will set you a task to complete on the website Mathswatch. The task will be based on the content you have learnt over the past half term in your maths lessons. You can use the space on the next page to do any working out if you need to.

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25bloggsj@benjaminbritten.school and password: BlueCat123
(example)





Don't forget about your MEAT SHEETS

The purpose of your MEAT sheet is to identify both strengths and areas for development for you to work on independently using MathsWatch.

Area 1: Number and Place Value	Area 2: Addition and Subtraction	Area 3: Multiplication and Division
Area 1: Number and Place Value 1. Counting in ones, tens, hundreds, thousands (100%) 2. Reading and writing numbers in words (100%) 3. Understanding place value (100%) 4. Rounding numbers (100%) 5. Comparing and ordering numbers (100%) 6. Addition and subtraction facts (100%) 7. Multiplication and division facts (100%) 8. Understanding the relationship between addition and subtraction (100%) 9. Understanding the relationship between multiplication and division (100%) 10. Understanding the relationship between addition, subtraction, multiplication and division (100%)	Area 2: Addition and Subtraction 1. Addition and subtraction facts (100%) 2. Addition and subtraction problems (100%) 3. Addition and subtraction problems involving money (100%) 4. Addition and subtraction problems involving measurement (100%) 5. Addition and subtraction problems involving time (100%) 6. Addition and subtraction problems involving mass (100%) 7. Addition and subtraction problems involving length (100%) 8. Addition and subtraction problems involving temperature (100%) 9. Addition and subtraction problems involving area (100%) 10. Addition and subtraction problems involving volume (100%)	Area 3: Multiplication and Division 1. Multiplication and division facts (100%) 2. Multiplication and division problems (100%) 3. Multiplication and division problems involving money (100%) 4. Multiplication and division problems involving measurement (100%) 5. Multiplication and division problems involving time (100%) 6. Multiplication and division problems involving mass (100%) 7. Multiplication and division problems involving length (100%) 8. Multiplication and division problems involving temperature (100%) 9. Multiplication and division problems involving area (100%) 10. Multiplication and division problems involving volume (100%)

How to use your MEAT sheet

Each question above has a reference number next to it. These numbers link to video clips and practice questions on MathsWatch.

To access MathsWatch, go to www.itslearning.com

Username: <https://www.itslearning.com>

Password: <https://www.itslearning.com>

In the 'Index' tab, select the qualification as 'KS2' and

type the reference number into the search box. Then

choose the clip that you need.

Strengths

Areas for Development



Homework 5: Sequences

learn by heart

Arithmetic sequences: add or subtract the same number each time.

3 9 15 21 27 ...
↖ ↖ ↖ ↖
+6 +6 +6 +6

examples

Work out the next 3 terms of this sequence: 10, 13, 16, 19,
The sequence is increasing by 3 each time, so:

22, 25, 28

1. Work out the next 3 terms in each of these arithmetic sequences:

a) 9, 11, 13, 15,,,

b) 128, 125, 122,,,

c) 15, 10, 5,,,

d) 2.3, 2.5, 2.7,,,

2. Fill in the missing terms in these arithmetic sequences:

a) 17, 15, 13, ____, 9, 7, 5, ____, 1

b) -10, -7, -4, ____, 2, 5, 8, ____, ____

arithmetic sequences

Work out what is happening in the sequences.
Can you figure out the missing terms?

A 7 12 17 22

B 5 8 11 14

C 16 13 10 7

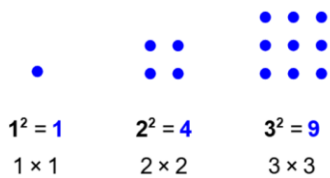
D 15 9 3 -3

E 22 14 6

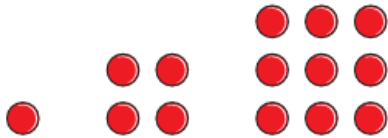
F 9 15 21

G -3 5 13

Square Numbers



The pattern shows the first three square numbers.



a) What are the first three square numbers?

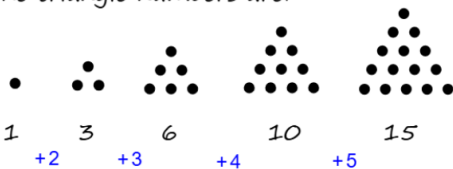
b) Draw the 4th and 5th square numbers.

c) What are the 4th and 5th square numbers?

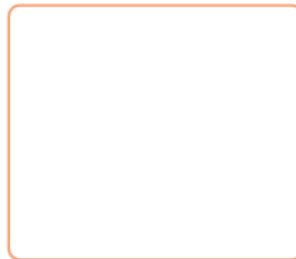
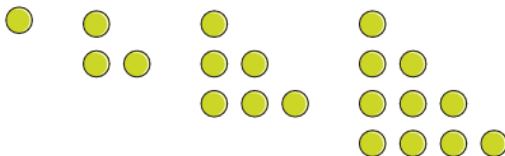
d) List the first ten square numbers.

learn by heart

The triangle numbers are:



The pattern shows the first four triangular numbers.



a) What are the first four triangular numbers?

b) Draw the 5th triangular number.

c) What is the 5th triangular number?

d) List the first ten triangular numbers.



Homework 6: Substitution

Substitution:

We can substitute variables for values when they are given. Examples

Example 1:

If $a = 4$

find the value of $a + 6$

$$4 + 6$$

$$= 10$$

Example 2:

If $a = 10$

find the value of $4a$

$$4 \times 10$$

$$= 40$$

Example 3:

If $a = 7$ and $b = 4$

Find the value of $5a + b$

$$5 \times 7 + 4$$

$$35 + 4$$

$$= 39$$

Complete the questions below

A1 If $a = 5$

Find the value of

$$a + 3$$

A2 If $a = 7$

Find the value of

$$a + 6$$

A3 If $a = 9$

Find the value of

$$a - 6$$

A4 If $a = 2$

Find the value of

$$6 - a$$

B1 If $a = 4$

Find the value of

$$3a$$

B2 If $a = 7$

Find the value of

$$6a$$

B3 If $a = 15$

Find the value of

$$\frac{a}{3}$$

B4 If $a = 5$

Find the value of

$$\frac{10}{a}$$

A1 If $a = 3$ and $b = 8$

Find the value of

$$a + b$$

A2 If $a = 10$ and $b = 4$

Find the value of

$$a - b$$

A3 If $a = 8$ and $b = 12$

Find the value of

$$b - a$$

A4 If $a = 5$ and $b = 6$

Find the value of

$$a + b + 3$$

B1 If $a = 7$ and $b = 2$

Find the value of

$$ab$$

B2 If $a = 2$ and $b = 5$

Find the value of

$$4ab$$

B3 If $a = 15$ and $b = 3$

Find the value of

$$\frac{a}{b}$$

B4 If $a = 9$ and $b = 3$

Find the value of

$$\frac{a + b}{a - b}$$

$$\square = 1 \quad \bigcirc = 2 \quad \triangle = 3$$

Use **substitution** to find the value of each **expression**.

a) $\square \square + \bigcirc$

b) $\square \square + \bigcirc + \triangle$

c) $\square + \bigcirc \bigcirc \bigcirc + \triangle$

$$\square = 2 \quad \bigcirc = 3 \quad \triangle = 2$$

d) $\square + \bigcirc + \triangle \triangle$

e) $2 \square + \bigcirc$

f) $2 \square + 2 \bigcirc + \triangle$

$$\square = 4 \quad \bigcirc = 3 \quad \triangle = 4$$

Use **substitution** to find the value of each **expression**.

a) $\square \square + \bigcirc - \triangle$

b) $\square + 2 \bigcirc - 2 \triangle$

c) $3 \square - \bigcirc - 2 \triangle$

$$\square = 4 \quad \bigcirc = 2 \quad \triangle = 5$$

d) $2 \square - 2 \bigcirc + 4 \triangle$

e) $4 \square - \bigcirc - 2 \triangle$

f) $3 \square - 4 \bigcirc - 3 \triangle$



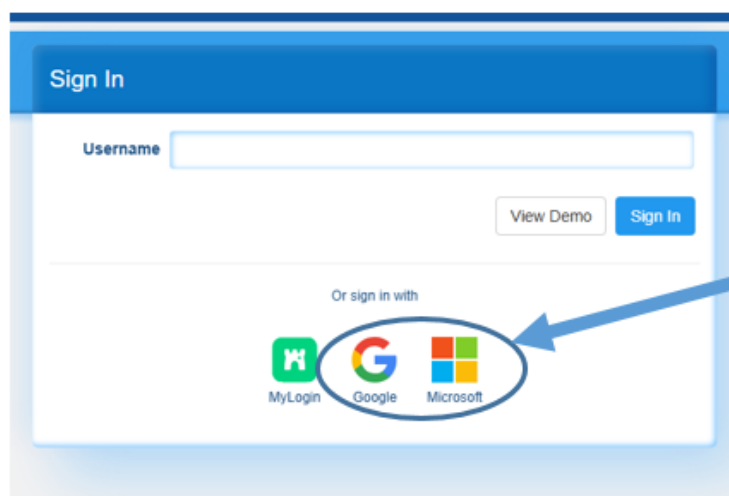
Homework 7:



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(example)





Homework 8: Research Task

Roman Numerals

Many clock faces still use roman numerals like IV and XI.

At the end of a film, the year it was made is often given using roman numerals. For example. MCMLXXX means 1980.

I	one	XI	eleven
II	two	XII	twelve
III	three	XX	twenty
IV	four (one before five)	XXX	thirty
V	five	XL	forty (ten before fifty)
VI	six	L	fifty
VII	seven	LX	sixty
VIII	eight	C	hundred
IX	nine (one before ten)	CM	nine hundred
X	ten	M	thousand

1 Write down the value of each of the numbers written below in roman numerals.

(a) VII

(b) XIII

(c) XVI

(d) XXVII

(e) XVIII

(f) XIX

(g) XLV

(h) LXXII

2 Write these numbers in roman numerals.

(a) 8

(b) 17

(c) 22

(d) 58

(e) 39

(f) 84

(g) 78

(h) 123

(i) 339

(j) 1265

(k) 1066

(l) 3194

Cistercian Numerals!

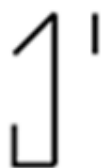
Using the key below, see if you can work out what numbers these Cistercian numerals represent.

1	2	3	4	5	6	7	8	9
10	20	30	40	50	60	70	80	90
100	200	300	400	500	600	700	800	900
1000	2000	3000	4000	5000	6000	7000	8000	9000

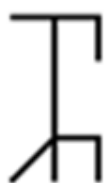
For example



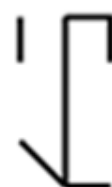
= 6085



= 7 0 _ _



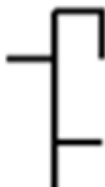
= _ 8 _ _



=



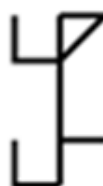
= _ 9 _ 5



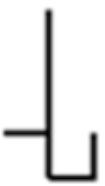
= 0 _ _ _



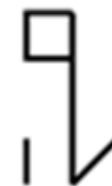
=



= _ _ 8 _



=



=



Homework 9: Numeracy

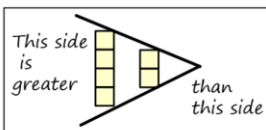
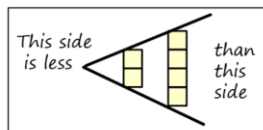
MENTAL STRATEGIES -
do these in your head

TIMESTABLES -
do these in your head

inequality symbols

learn by heart

$<$ less than	$>$ greater than	$\leq$ less than or equal	$\geq$ greater than or equal	$\neq$ not equal
---------------	------------------	---------------------------	------------------------------	------------------



X	5	3	6	4	2
5					
3					
2					
6					
4					

1. Decide whether each of these statements are true or false.

a) $3 > 5$

b) $6 \geq 4$

c) $2 > 2$

d) $1 \leq 0$

e) $3 < 7$

f) $4 < 2$

g) $7 \neq 7$

h) $1999 > 2000$

i) $20394 \neq 9039$

Complete these statements using one of these symbols: $<$ $>$ $=$

a) $5 \bigcirc 0$

d) $10394 \bigcirc$ Ten thousand

b) $9 \bigcirc 9$

e) $9949480 \bigcirc$ 1 million

c) $7 \bigcirc 12$

f) $50193 \bigcirc$ Half a million

Arrange the numbers from the box to fit the chain:

$\square > \square > \square > \square > \square$

12	5	4
1.2	4.25	

comparing decimals

learn by heart

Decimal Places: the number of digits after the decimal point, e.g. 0.405 has 3 decimal places.

Adding zeros to the end of a decimal does not effect its size, so $0.1 = 0.10 = 0.10000000$

examples

Which is larger 0.4 or 0.34?

True or false: $0.30 > 0.3$

→ $0.4 = 0.40$,
so 0.4 is larger.

False, these numbers are
equal.

By adding a zero to 0.4, both numbers have two decimal places and we can easily see that '40 hundredths' is bigger than '34 hundredths'

1. 0.6 is the same as:

a) 0.600

b) 6.0

c) 0.06

d) 0.66

2. Which of these numbers is the **largest**?

a) 0.92

b) 0.149

c) 0.840

d) 0.09999

3. Select the **larger** number in each pair, or write = if they are the same.

a) 0.412 or 0.48

b) 1.38 or 1.4

c) 0.508 or 0.507

d) 7.05 or 7.005

e) 5.125 or 5.25

f) 0.3 or 0.29

g) 9.49 or 9.491

h) 10.46 or 1.047

i) 0.16 or 0.106

In each row, decide which is the smallest number:

a) 0.3

0.29

0.301

0.4

0.06

b) 0.07

0.03

0.10

0.009

0.2

c) 0.009

0.08

0.21

0.24

0.098

d) 0.41

0.401

0.4

0.041

0.004

e) 0.082

0.208

0.028

0.28

0.008



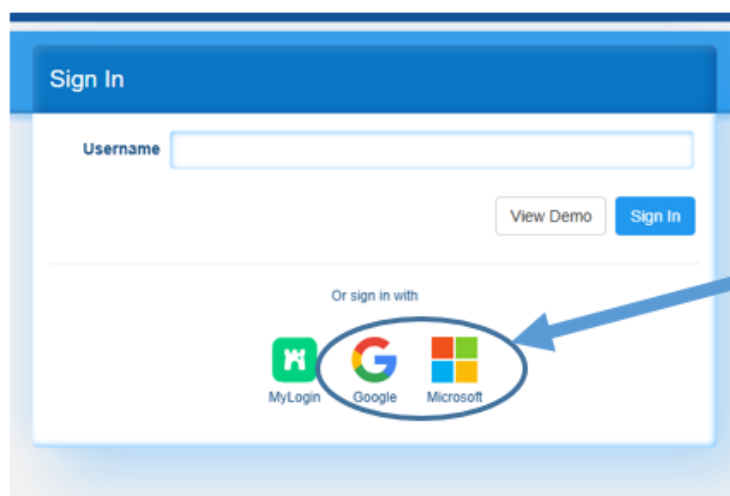
Homework 10:

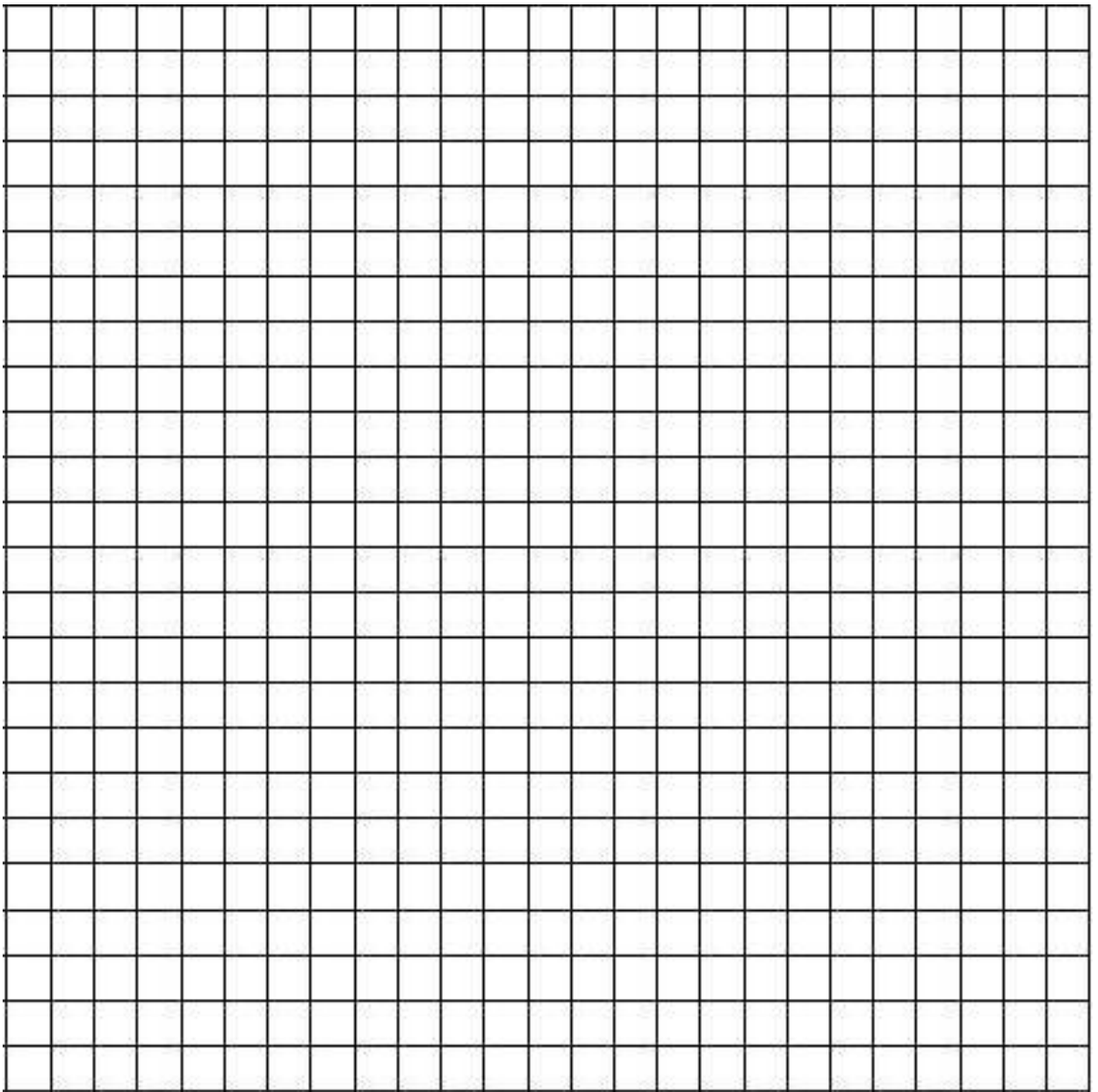


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25bloggsj@benjaminbritten.school and password: BlueCat123
(example)





Don't forget about your MEAT SHEETS

The purpose of your MEAT sheet is to identify both strengths and areas for development for you to work on independently using MathsWatch.

Area 1: Basic Skills (10 questions)		Area 2: Problem Solving (10 questions)		Area 3: Reasoning (10 questions)	
1. Add 15 to 25	1. A number is 10 more than 5. What is the number?	1. What is the next number in the sequence: 2, 4, 6, 8, 10?	1. What is the next number in the sequence: 10, 20, 30, 40, 50?		
2. Subtract 8 from 12	2. A number is 5 less than 10. What is the number?	2. What is the next number in the sequence: 1, 3, 5, 7, 9?	2. What is the next number in the sequence: 100, 200, 300, 400, 500?		
3. Multiply 3 by 4	3. A number is 2 more than 7. What is the number?	3. What is the next number in the sequence: 10, 20, 30, 40, 50?	3. What is the next number in the sequence: 1000, 2000, 3000, 4000, 5000?		
4. Divide 12 by 3	4. A number is 1 less than 15. What is the number?	4. What is the next number in the sequence: 100, 200, 300, 400, 500?	4. What is the next number in the sequence: 10000, 20000, 30000, 40000, 50000?		
5. Add 10 to 5	5. A number is 3 more than 8. What is the number?	5. What is the next number in the sequence: 1000, 2000, 3000, 4000, 5000?	5. What is the next number in the sequence: 100000, 200000, 300000, 400000, 500000?		
6. Subtract 5 from 18	6. A number is 4 less than 12. What is the number?	6. What is the next number in the sequence: 10000, 20000, 30000, 40000, 50000?	6. What is the next number in the sequence: 1000000, 2000000, 3000000, 4000000, 5000000?		
7. Multiply 6 by 2	7. A number is 1 more than 9. What is the number?	7. What is the next number in the sequence: 100000, 200000, 300000, 400000, 500000?	7. What is the next number in the sequence: 10000000, 20000000, 30000000, 40000000, 50000000?		
8. Divide 20 by 4	8. A number is 2 less than 18. What is the number?	8. What is the next number in the sequence: 1000000, 2000000, 3000000, 4000000, 5000000?	8. What is the next number in the sequence: 100000000, 200000000, 300000000, 400000000, 500000000?		
9. Add 25 to 10	9. A number is 5 more than 6. What is the number?	9. What is the next number in the sequence: 10000000, 20000000, 30000000, 40000000, 50000000?	9. What is the next number in the sequence: 1000000000, 2000000000, 3000000000, 4000000000, 5000000000?		
10. Subtract 3 from 14	10. A number is 1 less than 11. What is the number?	10. What is the next number in the sequence: 100000000, 200000000, 300000000, 400000000, 500000000?	10. What is the next number in the sequence: 10000000000, 20000000000, 30000000000, 40000000000, 50000000000?		
Total: 10	Total: 10	Total: 10	Total: 10		

How to use our MARS sheets

Each question above has a reference number next to it. These numbers link to video clips and practice questions on Mathswatch.

To access Mathswatch, go to www.aleksmathswatch.com
or simply www.mathswatch.com
(or <https://www.mathswatch.com>)

Please enter your login details in the format **username/123456789**
(e.g. **1234567890**)

is the 'video' tab, select the question as 'MARS' and type the reference number into the search box. Then

Areas for Development

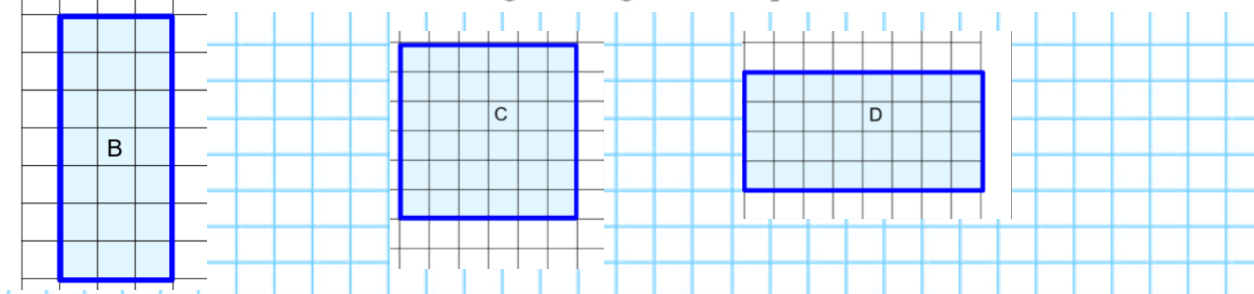


Homework 11: Perimeter

learn by heart

The perimeter of a shape is the total length of all of its sides.

Find the perimeter of the following rectangles and squares.

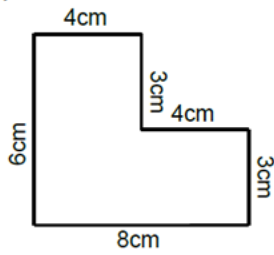


- 1). 3 cm 3 cm
- 2). 8 cm 3 cm
- 3). 7 cm 5 cm
- 4). 5 cm 5 cm

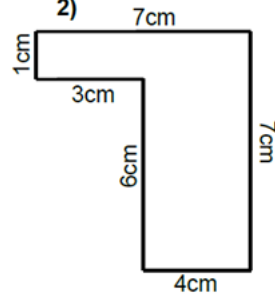
- 6). 6 cm 14 cm
- 7). 9 m 9 m
- 8). 7 m 7 m
- 9). 6 cm 9 cm

- 11). 15 cm 3 cm
- 12). 7 cm 21 cm
- 13). 0.5 m 0.5 m
- 14). 2.5 m 8 m

1)



2)

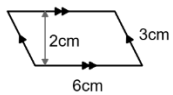


learn by heart

The perimeter of a shape is the total length of all of its sides.

examples

1. Work out the perimeter of the parallelogram.



$$6 + 3 + 6 + 3 = 18$$

Perimeter = 18cm

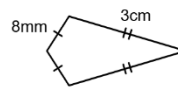
2. Work out the perimeter of a regular hexagon with sides of length 15mm.

$$6 \times 15 = 90$$

Perimeter = 90mm

The sides of a regular shape all have the same length.

3. Work out the perimeter of the kite.

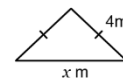


Make sure the units match.

$$8 + 8 + 30 + 30 = 76$$

Perimeter = 76mm (or 7.6cm)

4. The triangle has a perimeter of 14m. Work out the value of x.

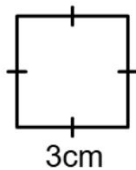


$$14 - 2 \times 4 = 14 - 8 = 6$$

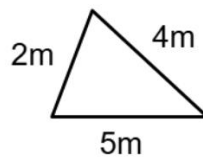
x = 6

1. Work out the perimeter of each shape:

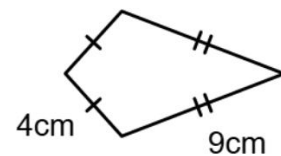
a)



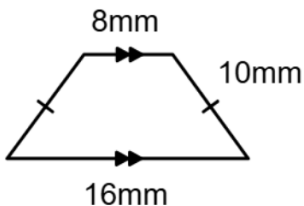
b)



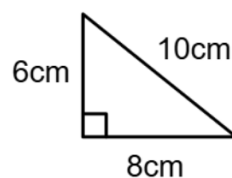
c)



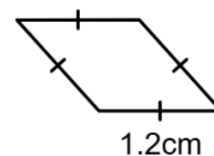
d)



e)



f)





Homework 9: Numeracy

Literacy challenge: Anagrams!

Rearrange the letters below to form 3 keywords used in maths:

ONVIIDS

NOICTALLACU

POSTRANEIO

MENTAL STRATEGIES -
do these in your head

TIMESTABLES -
do these in your head

×	2	4	6	3	5
4					
3					
5					
2					
6					

examples

Round 8462 to the nearest 100

8 4 | 6 2
 ↑

5 or more?

Yes

→ 8500

Write 13,409 correct to the nearest thousand.

1 3 | 4 0 9
 ↑

5 or more?

No

→ 13,000

Round 735 to the nearest 10

7 3 | 5
 ↑

5 or more?

Yes

→ 740

Rules for rounding 5 or more let it soar, (round up)
4 or less let it rest. (round down)

Round these numbers to the nearest 10.

Number	Rounded Number
24	
36	
45	
52	
68	
135	
205	
314	

Round these numbers to the nearest 100.

Number	Rounded Number
220	
363	
450	
525	
605	
251	
199	
44	

1. Round each number to the **nearest ten**:

- a) 63 b) 35 c) 149 d) 3462

2. Round each number to the **nearest hundred**:

- a) 375 b) 844 c) 3960 d) 6543

3. Round each number to the **nearest thousand**:

- a) 4823 b) 7504 c) 15,972 d) 30,395

4. Round each value as indicated:

- a) 760 to the nearest 100 b) 184cm to the nearest 10cm
c) 4460 to the nearest thousand d) 3827 to the nearest hundred

rounding to 1 decimal place (d.p.)

learn by heart

A number with 1 decimal place has 1 digit after the decimal point, e.g. 3.4

When rounding to 1 d.p., we look at the digit in the 2nd decimal place.
If it is 5 or more, we round UP, meaning we increase the value of the digit in the 1st decimal place by 1.

examples

Round:

- a) 4.327 to 1 decimal place 4.3 | 27 4.3

1. Which of these numbers have 1 decimal place? Choose all that apply.

- a) 43 b) 4.5 c) 2.75 d) 62.0 e) 200.30

2. Round each number to 1 decimal place:

- a) 3.62 d) 2.45 g) 4.319 j) 105.1098
b) 1.84 e) 13.19 h) 26.453 k) 459.821
c) 2.01 f) 4.55 i) 19.65 l) 8.98

Homework 13: Analogue clock

learn by heart

The hour hand is the shorter hand

The minute hand is longer

The hour is split into 5 minute intervals.
The 1 represents 1 lot of 5 minutes after the hour

15 minutes past the hour (at 3) is pronounced 'quarter past'

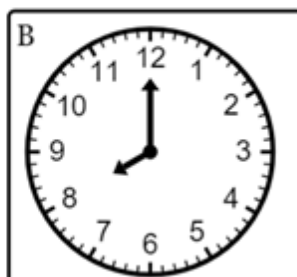
30 minutes past the hour (at 6) is pronounced 'half past'

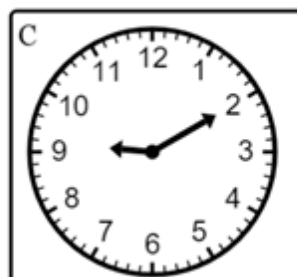


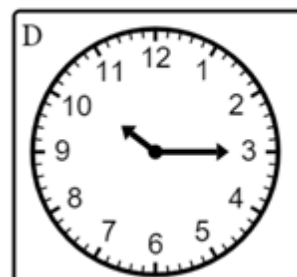
The minute hand is at 2, this means
 $2 \times 5 = 10$
minutes past the hour,
so 4.10

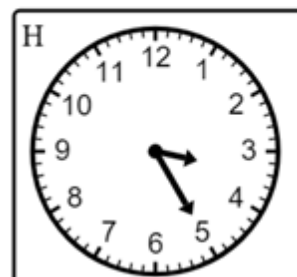
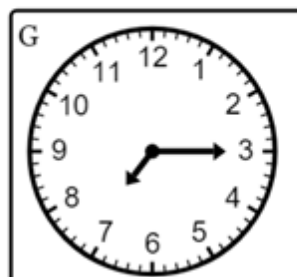
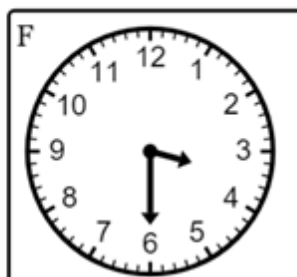
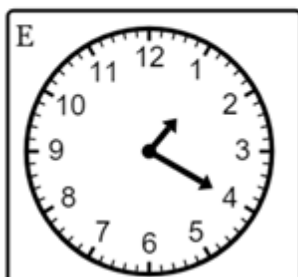
1. Write the correct time under each clock



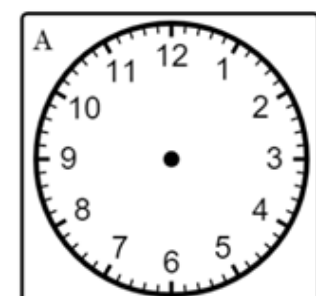




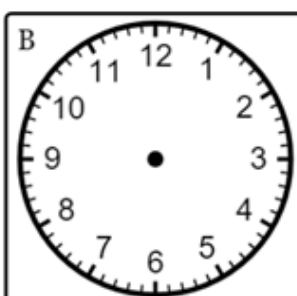




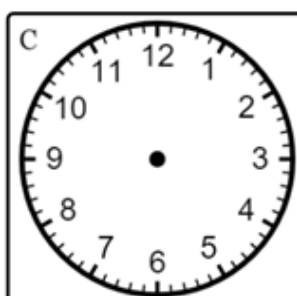
2. On each clock draw the hands in the correct place to show the time given



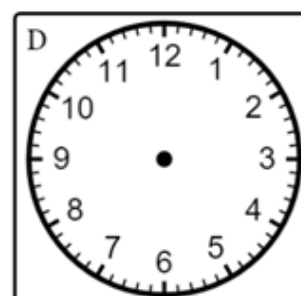
11.05



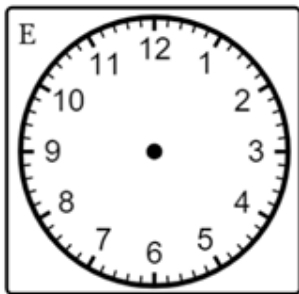
4.15



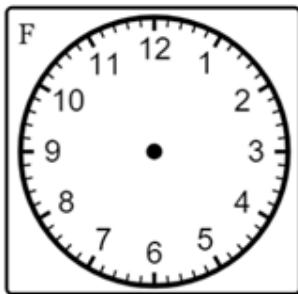
9.20



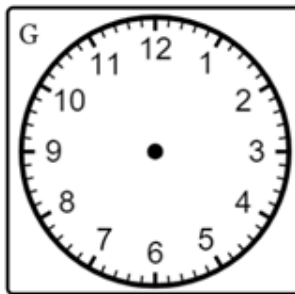
6.30



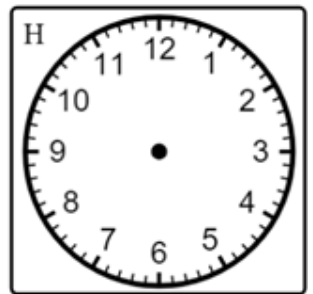
Twenty past eight



Twenty five past seven



Half past one



Ten past twelve

1. Work out the given times:

a) 20 minutes after 3:15 pm

b) 4 hours after 11 am

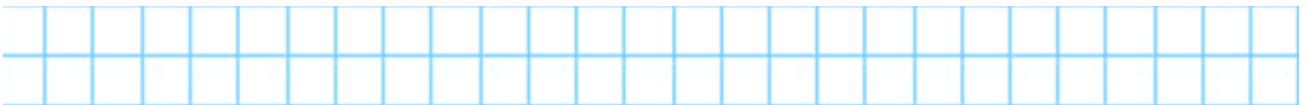
c) $\frac{1}{2}$ hour after 6:50 pm

d) 35 minutes after 10:40 am

e) 40 minutes **before** 9:30 am

f) $\frac{3}{4}$ hour **before** 4:20 pm

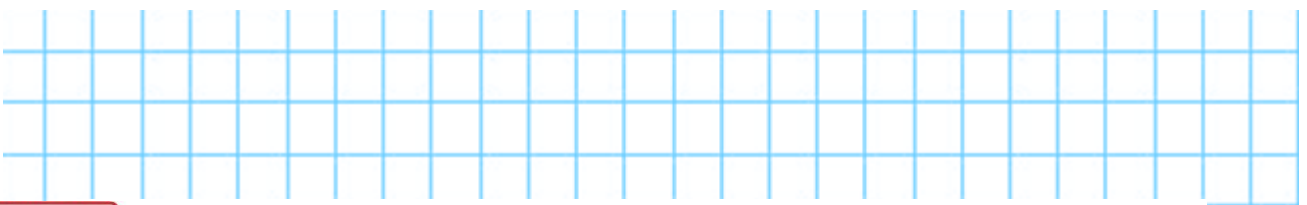
2. A TV programme is 30 minutes long and starts at 7:10 pm.
At what time does the programme end?



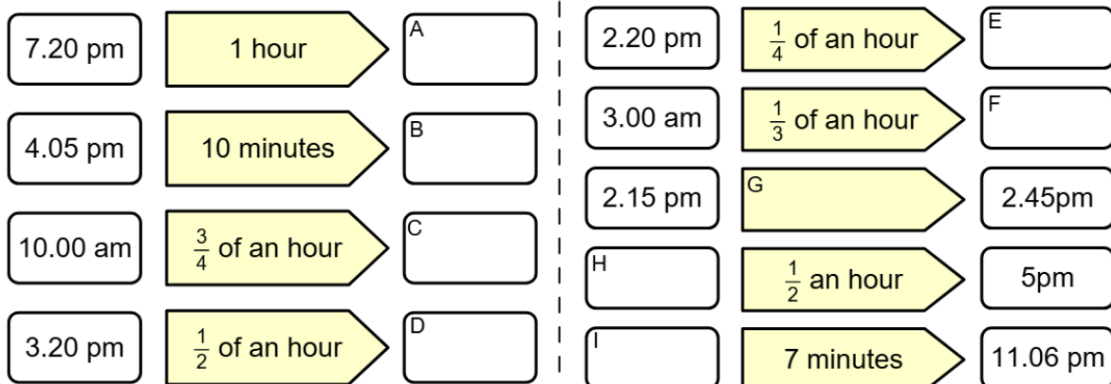
3. Vikki leaves home at 2:45 pm and walks to a park.
She arrives at the park 25 minutes later. At what time is this?



4. A meal takes 50 minutes to cook.
The meal needs to be ready for 6:30 pm.
At what time should the chef start cooking the meal?



CHALLENGE Work out the missing times in these flow diagrams:





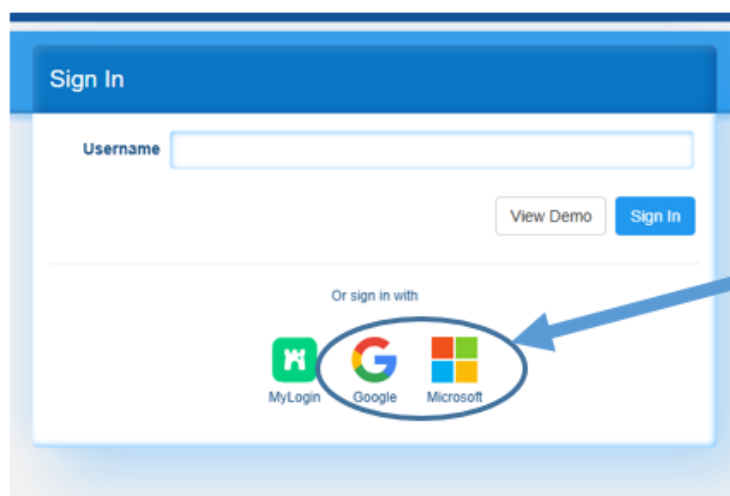
Homework 14:

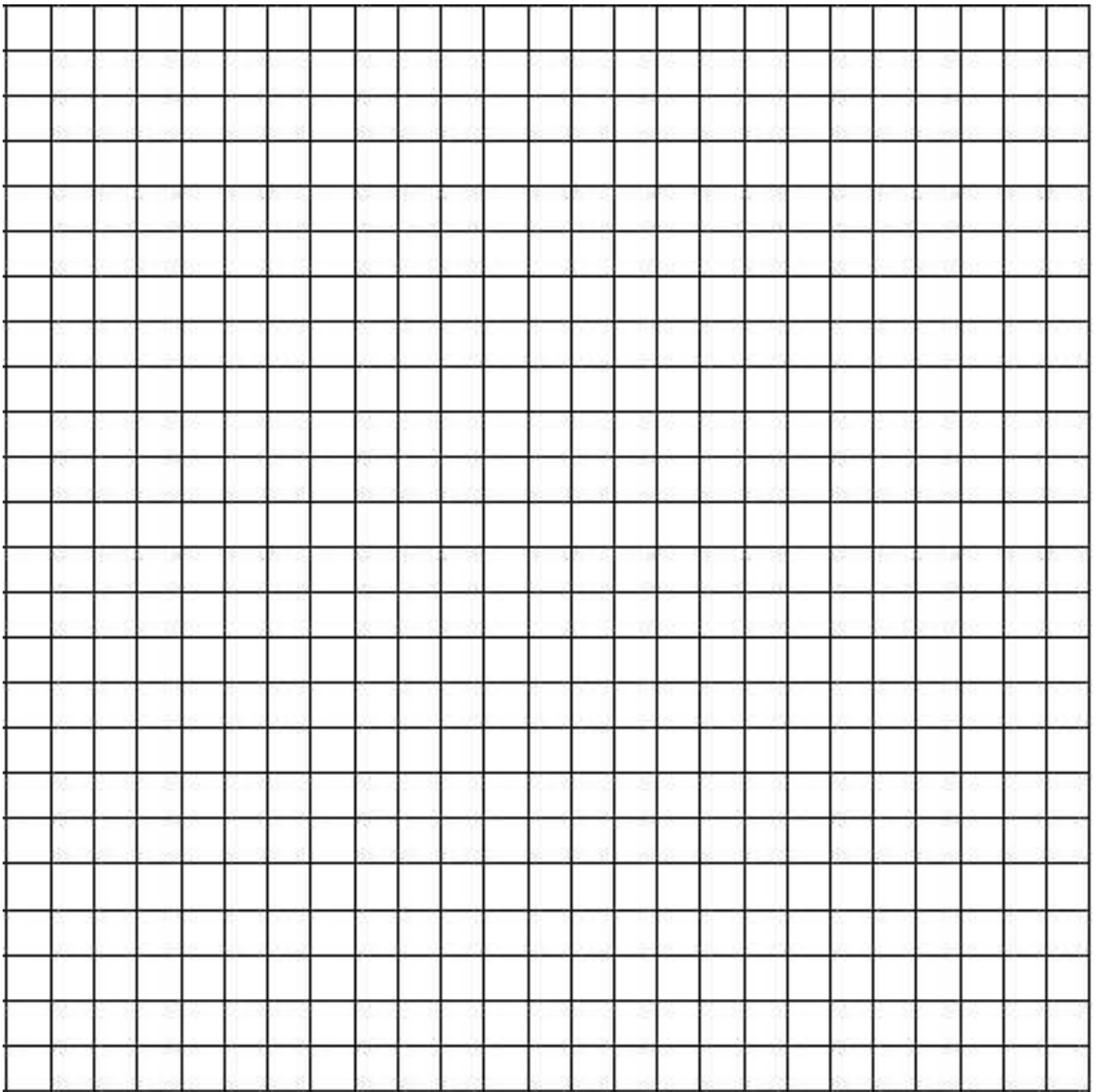


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(example)





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Area 1: Basic Skills (10 questions)	Area 2: Fractions (10 questions)	Area 3: Geometry (10 questions)
1. Addition of two numbers (10)	1. Addition of two fractions (10)	1. Area of a rectangle (10)
2. Subtraction of two numbers (10)	2. Subtraction of two fractions (10)	2. Perimeter of a rectangle (10)
3. Multiplication of two numbers (10)	3. Multiplication of two fractions (10)	3. Volume of a cube (10)
4. Division of two numbers (10)	4. Division of two fractions (10)	4. Surface area of a cube (10)
5. Addition of three numbers (10)	5. Addition of three fractions (10)	5. Area of a triangle (10)
6. Subtraction of three numbers (10)	6. Subtraction of three fractions (10)	6. Perimeter of a triangle (10)
7. Multiplication of three numbers (10)	7. Multiplication of three fractions (10)	7. Volume of a cylinder (10)
8. Division of three numbers (10)	8. Division of three fractions (10)	8. Surface area of a cylinder (10)
9. Addition of four numbers (10)	9. Addition of four fractions (10)	9. Area of a circle (10)
10. Subtraction of four numbers (10)	10. Subtraction of four fractions (10)	10. Perimeter of a circle (10)
Total: 100	Total: 100	Total: 100
Strengths	Areas for Development	

How to use your MEAT sheet:
Each question above has a reference number next to it. These numbers link to video clips and practice questions on MathsWatch.
To access MathsWatch, go to www.itslearning.com
Username: <https://www.itslearning.com>
or a password (if you have one)
Remember your birthday in the format **DDMMYY** (e.g. 01/01/2001)
In the 'Index' tab, select the qualification as 'GCSE' and type the reference number into the search box. Then choose the clip that you need.

EXTRA SUPPORT

*If you need help with completing your homework, please use Mathswatch and watch the video clips for the topic. If you are still stuck, speak to **your** class teacher.*

If you need to contact the Head of Maths regarding any worries or concerns, you can contact Miss Pankhurst at:

j.pankhurst@benjaminbritten.school

RESOURCES PROVIDED BY:

Numeracy Ninjas

Mr Carter Maths

Miss B's Resources

NRich

Worksheet Works

Dr Austin

Mathspad

