

Benjamin Britten Academy of Music and Mathematics

MATHEMATICS HOMEWORK BOOKLET

Year 7 Book C
SPRING TERM



NAME:



CONTENTS

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Mathswatch

Log in details:

To log into mathswatch, please click the google button and type in your school email address and your password.

Sign In

Username

[View Demo](#) [Sign In](#)

Or sign in with...

[MyLogin](#) [Wonde](#) [Google](#) [Microsoft](#)

username example (school email): 25bloggsj@benjaminbritten.school

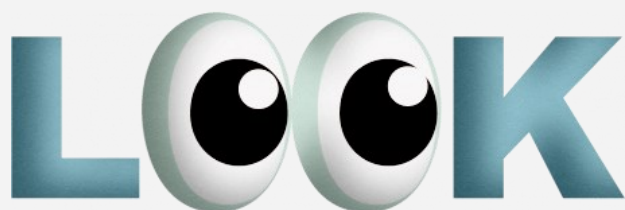
Password example (school password): BlueCat123.

Completing your homework

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

There are **answers** for all booklet tasks at the back of the booklet. Part of your homework task each week is to **mark your work**. Make sure you mark all your answers in another colour pen, making any corrections if you need to.

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



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

Complete the multiplication grid below.

×	2	8	4	12	7	11	9	3	6	5	10
3											
6											
8											
4											
10											
11											
9											
5											
7											
12											
2											

Complete the multiplication grid below.

x	10	20	30	40
2	20	40		80
3	30	60		
4	40		120	
5		100		
10			300	

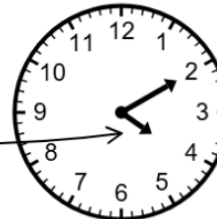
measuring time 1 (the first half hour)



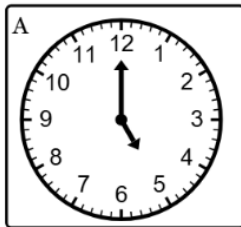
learn by heart

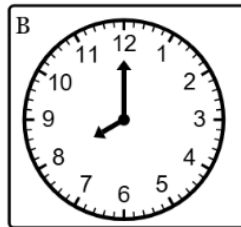
The hour hand is the shorter hand

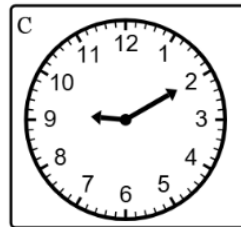
The minute hand is longer

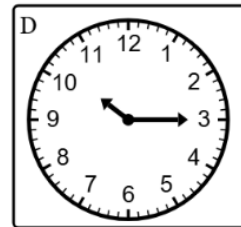


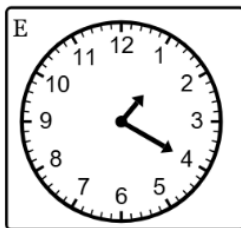
1. Write the correct time under each clock

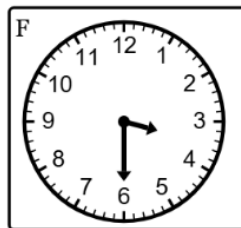


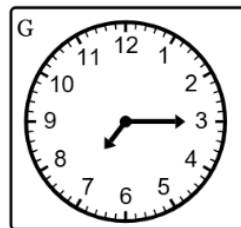


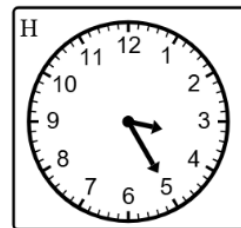






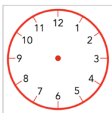






MENTAL STRATEGIES -
do these in your head

TIMESTABLES -
do these in your head

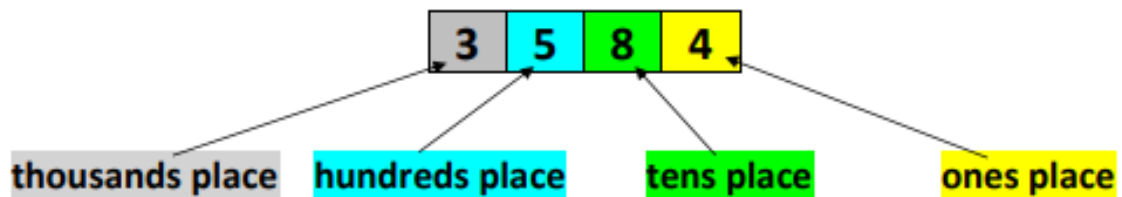
Q	Question	Answer
1	$3 + 17$	
2	What is double 55?	
3	$112 + 10$	
4	$29 - 10$	
5	$6 = 1 + \square$	
6	$58 - 11 = 58 - 8 - \square$	
7	$73 + 73 = \square \times 73$	
8	Draw hands on the clock face showing 10:10 am	
9	$7 + 3$	
10	$\square + 46 = 100$	
Total out of 10		

Q	Question	Answer
1	$6 \times 7 = \square$	
2	$24 \div 4 = \square$	
3	$4 \times \square = 28$	
4	$24 \div \square = 4$	
5	$7 \times 6 = \square$	
6	$18 \div 6 = \square$	
7	$\square \times 4 = 4$	
8	$\square \div 2 = 3$	
9	$5 \times 7 = \square$	
10	$54 \div 6 = \square$	
Total out of 10		



HOMEWORK 2: PLACE VALUE

A digit's place value tells us how much each digit is worth.



1) Write down which digit is in the **ones** place:

1267 → 7	4235 →	3190 →	8302 →
----------	--------	--------	--------

2) Write down which digit is in the **tens** place:

2743 →	5194 →	8320 →	307 →
--------	--------	--------	-------

3) Write down which digit is in the **hundreds** place:

6035 →	3502 →	1238 →	839 →
--------	--------	--------	-------

4) Write down which digit is in the **thousands** place:

6235 →	8302 →	1428 →	389 →
--------	--------	--------	-------

What is the value of the...

8	87	
4	649	
1	821	
6	462	

2	9872	
3	3908	
5	1053	
9	7892	

What is the value of the...

6	79621	
2	33026	
4	49996	
7	67062	

1	61903	
4	45170	
9	12934	
2	94023	



Write in digits:

- a) Three million and twenty two
- b) Five hundred and eighteen thousand
- c) Twenty six thousand and four
- d) Ninety four million, three thousand and six
- e) Four million, two hundred and three thousand
- f) Three hundred and six thousand and thirty nine

Select the correct answer from a choice of 8 possibilities.

- 1) I am a 3 digit number.
I am greater than 350.
My hundreds digit is even.
I am not a multiple of 5.
Who am I?

782	495	328	294
684	583	835	962

- 2) I am not a multiple of 10.
My tens digit is a multiple of 3.
If you round me to the nearest 100, I become 500.
Who am I?

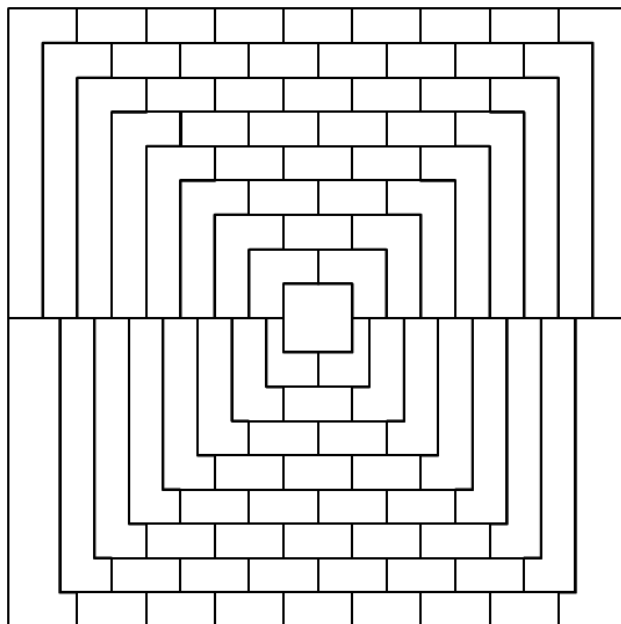
427	476	562	460
528	592	530	535



HOMEWORK 3: FOUR COLOUR THEOREM

Part A

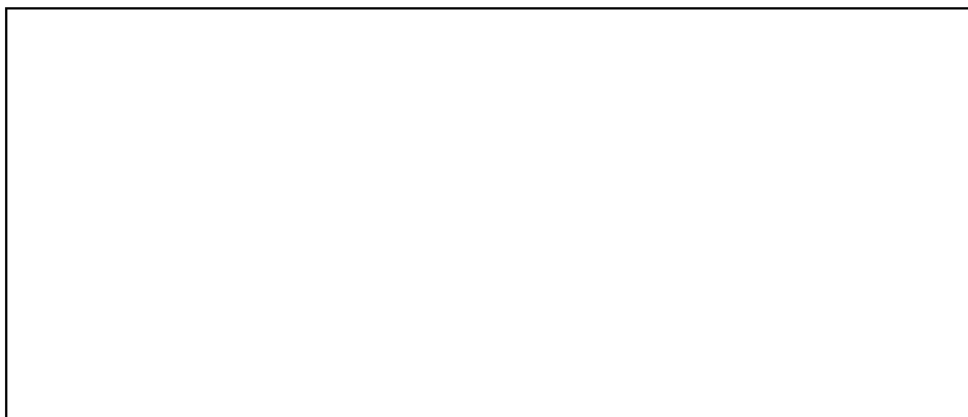
Colour in the pattern so that no areas which touch have the same colour. Try to use the least number of different colours possible.



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

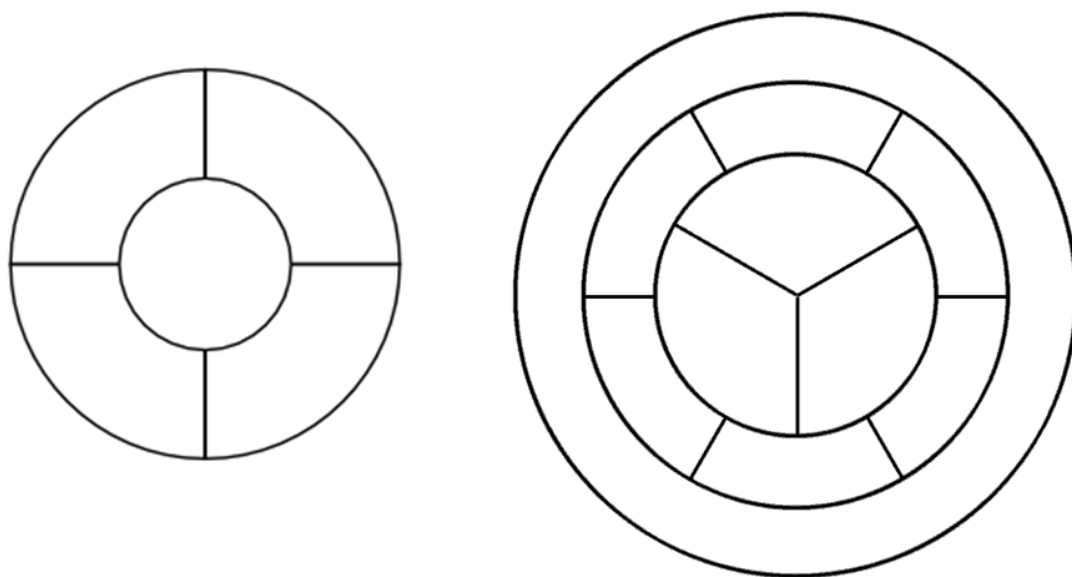
Part B

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: NUMERACY

Complete the multiplication grid below.

×	7	2	12	4	6	8	11	3	5	9	10
4											
7											
12											
2											
5											
8											
11											
9											
3											
6											
10											

x	50	20	60	30
2	100	40		
3	150		180	
4		80		
5				
10				300

short division

example

Calculate $635 \div 5$

$$\begin{array}{r} 135 \\ 5 \overline{) 635} \end{array}$$

Calculate the following. The answers are all integers:

a) $448 \div 8$

c) $468 \div 9$

e) $639 \div 9$

short division

example

Calculate $42 \div 8$

$$\begin{array}{r} 5.25 \\ 8 \overline{) 42.00} \end{array}$$

Start by asking, how many 8's in 4? None.
 Carry the 4 - how many 8's in 42? **5**. Remainder 2.
 Carry the remainder - how many 8's in 20? **2**. Remainder 4.
 Carry the remainder - how many 8's in 40? **5**.

b) $2766 \div 6$

d) $665 \div 5$

f) $20,095 \div 5$

Calculate the following. The answers are all decimals:

a) $100 \div 8$

c) $211 \div 5$

e) $941 \div 5$



HOMEWORK 5: AVERAGES

Recall and Recap:

Here is a fun rhyme to help you remember the three M's and the R:

Hey diddle diddle, the **median's** the middle,
You add then divide for the **mean**.

The **mode** is the one that you see the most,
And the **range** is the difference between.

For each set of data, work out the average or range:

a) 9 4 6 6 4 7 6 2 Mode	b) 34 36 43 41 34 Median
c) 2 3 4 4 4 5 6 7 Range	d) 2 3 6 7 7 8 Mean
e) 21 15 19 31 32 19 Median	f) 320 331 327 313 326 Range
g) 24 15 16 24 17 Mean	h) 35 30 26 36 17 25 Mode

What's wrong?

Harry has tried to work out some averages and ranges, but has got all of them wrong! Work out what is wrong with each of Harry's answers.

a) Work out the mode: 7 6 7 4 12 11 6 <i>Mode = 7</i> ✗	b) Work out the median: 48 61 48 55 54 49 54 <i>Median = 55</i> ✗
c) Work out the median: 0.9 0.9 0.9 1.3 1.3 1.3 <i>Median = 0.9 and 1.3</i> ✗	d) Work out the range: 78 82 83 87 93 96 <i>Range = 96 - 78 = 22</i> ✗

Problem solving!

Apply your core skills to the challenge questions below...

If it is false please write down why.



True or False?

Averages and Range

For each statement, circle the correct response.

1	4, 2, 8, 3, 9	The range is 5	True	False
2	5, 7, 8, 11, 12	The median is 8	True	False
3	9, 6, 6, 3, 4	The mode is 6	True	False
4	10, 1, 9, 4	The mean is 6	True	False
5	5, 6, 6, 8, 8, 9	The median is 6 and 8	True	False
6	1, 2, 3, 5, 6, 9	The median is 4	True	False
7	2, 3, 4	The mean, mode and median are all 3	True	False
8	5, 8, 2, 6, 3	There is no mode	True	False
9	8, 11, 6, 4, 6	The mean and the range are the same	True	False



HOMEWORK 6: MATHSWATCH



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.

Below are the log in instructions you will need in order to access and complete this homework task.

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

Username— firstnamelastname@benjamin

Password— your DOB (format: monthDYYYYY)

If you need a printed copy of this homework task, make sure you speak to your class teacher before the due date and they will print a copy for you to complete.

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light blue lines. The paper is otherwise white and contains no other markings or text. In the top right corner, there is a small, partially visible circular logo with some text around its edge, which appears to be "SCIENTIUS UT SE".





HOMEWORK 7: NUMERACY

MENTAL STRATEGIES -
do these in your head

Q	Question	Answer
1	$\square + 7 = 10$	
2	What is double 9?	
3	Halve 40	
4	$111 + 30$	
5	$66 + 63$	
6	$17 + 9 = 17 + 3 + \square$	
7	$3 + 468$	
8	$33 + 70 = 30 + 70 + \square$	
9	Double 58	
10	What is half of 7?	
Total out of 10		

TIMESTABLES -
do these in your head

Q	Question	Answer
1	$6 \times 2 = \square$	
2	$36 \div 6 = \square$	
3	$5 \times \square = 15$	
4	$56 \div \square = 7$	
5	$3 \times 9 = \square$	
6	$5 \div 5 = \square$	
7	$\square \times 9 = 9$	
8	$\square \div 6 = 3$	
9	$8 \times 3 = \square$	
10	$18 \div 3 = \square$	
Total out of 10		

MONEY RIDDLES 1

Use the clues to find the correct set of coins from the 6 possibilities.

CHALLENGE A

- I am more than 10 pence.
- I am less than 20 pence.
- I have fewer than 3 coins.
- I make an even number of pence.

Who am I?



Problem solving!

Apply your core skills to the challenge question below...





Writing cheques



Write the missing numbers on these cheques.

The first one is done for you.



Pay <u>J. Baker</u>	Date: 30.04.08
<u>Thirty-eight pounds and</u>	£ 38 . 67
<u>sixty-seven pence</u>	
	 H. Norris

Pay <u>T. Jones</u>	Date: 30.04.08
<u>One hundred and two pounds and</u> 	£
<u>seventy pence</u>	
	 H. Norris

Pay <u>B. Torres</u>	Date: 30.04.08
<u>One hundred and twenty pounds and</u> 	£
<u>seven pence</u>	
	 H. Norris



HOMEWORK 8: SEQUENCES

sequences: term to term rules

learn by heart

The numbers in a sequence are called **terms**

A sequence can be defined by a **term-to-term rule**, which tells us how to work out the next term in the sequence.

For an **arithmetic sequence**, the term to term rule involves only adding or subtracting a number.

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, ____, ____

Problem solving!

Apply your core skills to the challenge questions below...

These patterns are made from sticks



Pattern 1



Pattern 2



Pattern 3

(a) Draw pattern 4

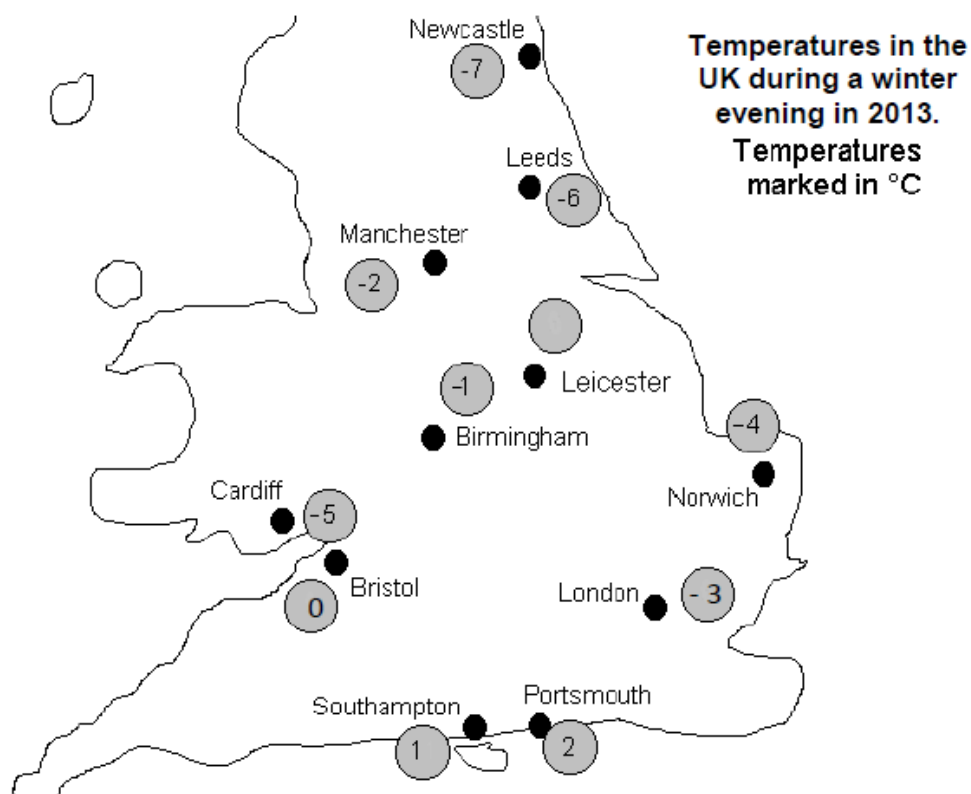
(b) Draw pattern 5

(c) How many sticks will there be in pattern 6?

(d) How many sticks will there be in pattern 10?



HOMEWORK 9: REAL LIFE MATHS



Section A: Decide which city is warmer or colder.

	Which city is warmer?
Cardiff or Southampton	
Portsmouth or London	
Manchester or Bristol	
Birmingham or Cardiff	
Newcastle or Leeds	

	Which city is colder?
Southampton or Leeds	
Bristol or Portsmouth	
Cardiff or Leeds	
Manchester or London	
Birmingham or Bristol	

Section B: Use the temperatures above to answer the following questions.

- 1) Which city was the coldest that evening?
- 2) Work out the difference between the highest and lowest temperature.
- 3) The temperature in Leicester was 10°C lower than the temperature in Portsmouth. Include the temperature of Leicester on the map.
- 4) The following evening the temperature in Manchester fell by 6°C . What was the temperature in Manchester the following evening?

The table shows the minimum and maximum daily temperatures in six cities in the USA in January.

City	Minimum °C	Maximum °C
New York	0°C	10°C
Los Angeles	8°C	18°C
Chicago	-4°C	8°C
Houston	11°C	20°C
Boston	-2°C	13°C
Anchorage	-12°C	-5°C

LOOK

N7c, N7a,
G2, G25

(a) Which city recorded the lowest **minimum** temperature?

.....
(1)

(b) What is the difference in °C between Boston's minimum and maximum temperature?

.....°C
(1)

(c) What is the difference in °C between Anchorage's minimum and maximum temperature?

.....°C
(1)



HOMEWORK 10: NUMERACY

MENTAL STRATEGIES -
do these in your head

Q	Question	Answer
1	$1 + \square = 20$	
2	Double 54	
3	$22 + 10$	
4	$44 - 40$	
5	$7 = 2 + \square$	
6	$75 - 11 = 75 - 5 - \square$	
7	$6 + 6 + 6 + 6 + 6 = 6 \times \square$	
8	What is the time on the clock?	pm
9	Double 7	
10	What is half of 44?	
Total out of 10		



TIMESTABLES -
do these in your head

Q	Question	Answer
1	$6 \times 6 = \square$	
2	$2 \div 2 = \square$	
3	$6 \times \square = 12$	
4	$40 \div \square = 5$	
5	$1 \times 9 = \square$	
6	$40 \div 8 = \square$	
7	$\square \times 7 = 49$	
8	$\square \div 3 = 1$	
9	$2 \times 2 = \square$	
10	$48 \div 6 = \square$	
Total out of 10		

MONEY RIDDLES 2

Use the clues to find the correct set of coins from the 6 possibilities.

CHALLENGE A

- I am more than 20 pence.
- All my coins are the same color.
- All of my coins have the same value.
- I am less than 50 pence.

Who am I?



rounding to the nearest 10, 100, 1000



examples

Round 45 to the nearest 10

= 50

Round 573 to the nearest 100

= 600

Round 2,035 to the nearest 1,000

= 2000

exercise 1g

1. Round these numbers to the nearest 10:

a) 64

c) 108

e) 15

g) 775

b) 92

d) 203

f) 596

h) 1025

2. Round these numbers to the nearest 100:

a) 556

c) 76

e) 3045

g) 14,250

b) 289

d) 1450

f) 56,980

h) 7,500

3. True or false: 426 rounded to the nearest hundred is 500

4. True or false: 91 rounded to the nearest hundred is 100

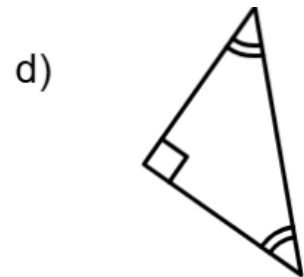
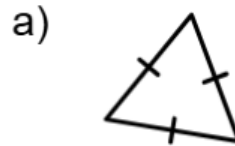
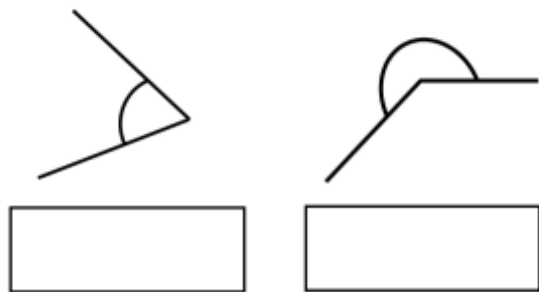
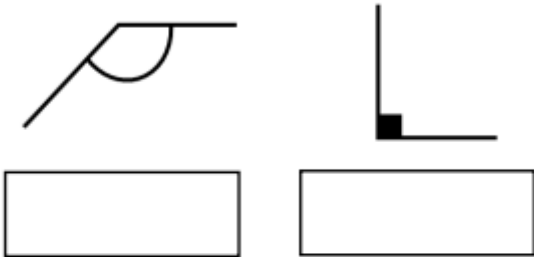
5. True or false: 19 rounded to the nearest 100 is 0



HOMEWORK 11: ANGLES

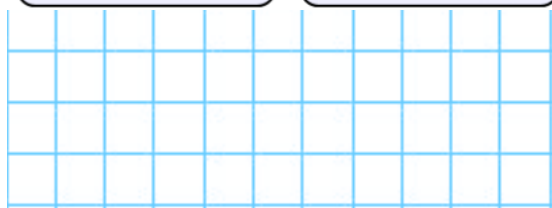
1. Label these angles as acute, right, obtuse or reflex:

Decide whether each triangle is isosceles, scalene or equilateral:



Which of these is impossible?

A triangle with 3 acute angles	A triangle with an obtuse angle
A triangle with a reflex angle	A triangle with a right angle

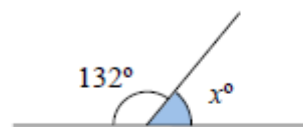


Given that angles on a point sum to 180°

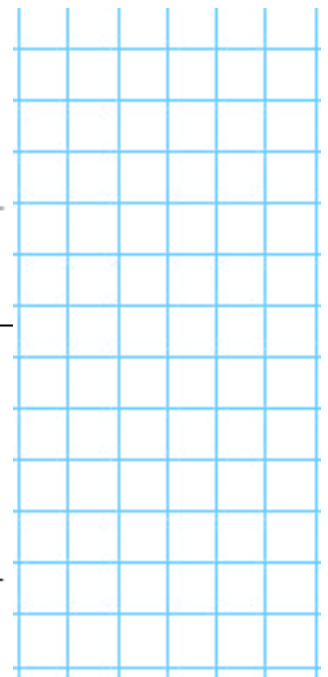
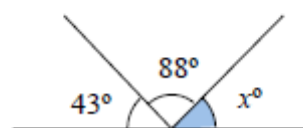
Find the missing angles below

U1

A1 Find the value x

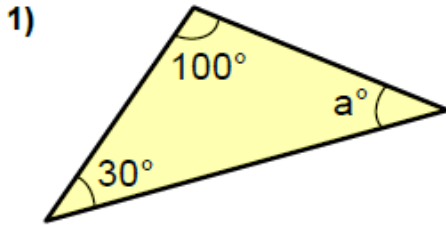


B1 Find the value x

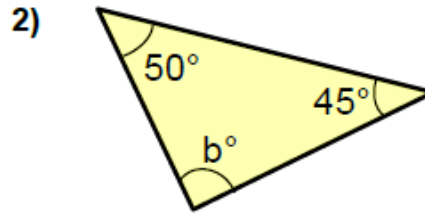


Given that angles in a triangle sum to 180°

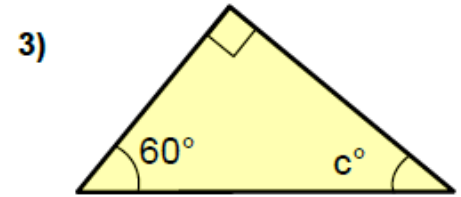
Find the missing angles below



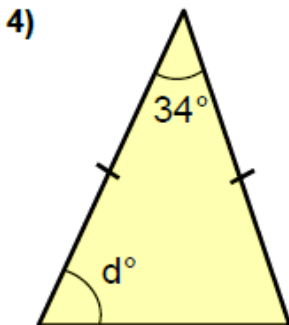
a =



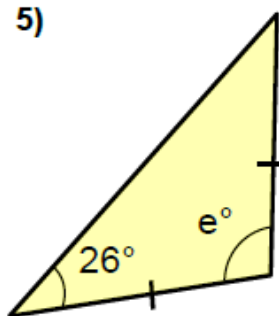
b =



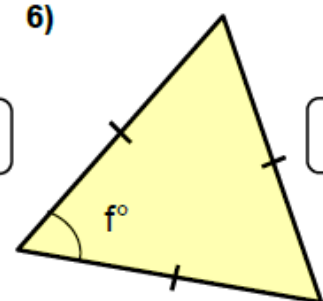
c =



d =



e =



f =



HOMEWORK 12: MATHSWATCH



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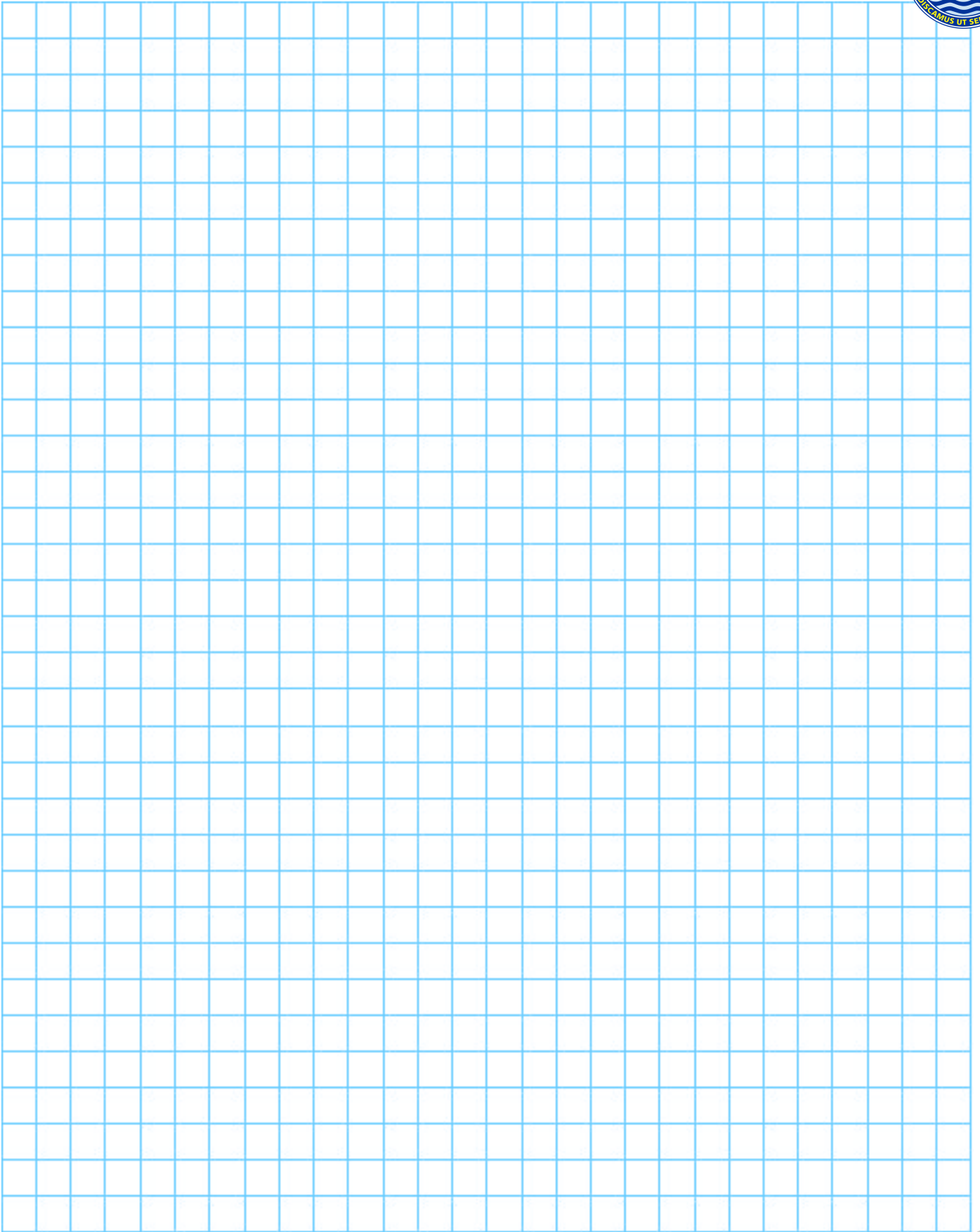
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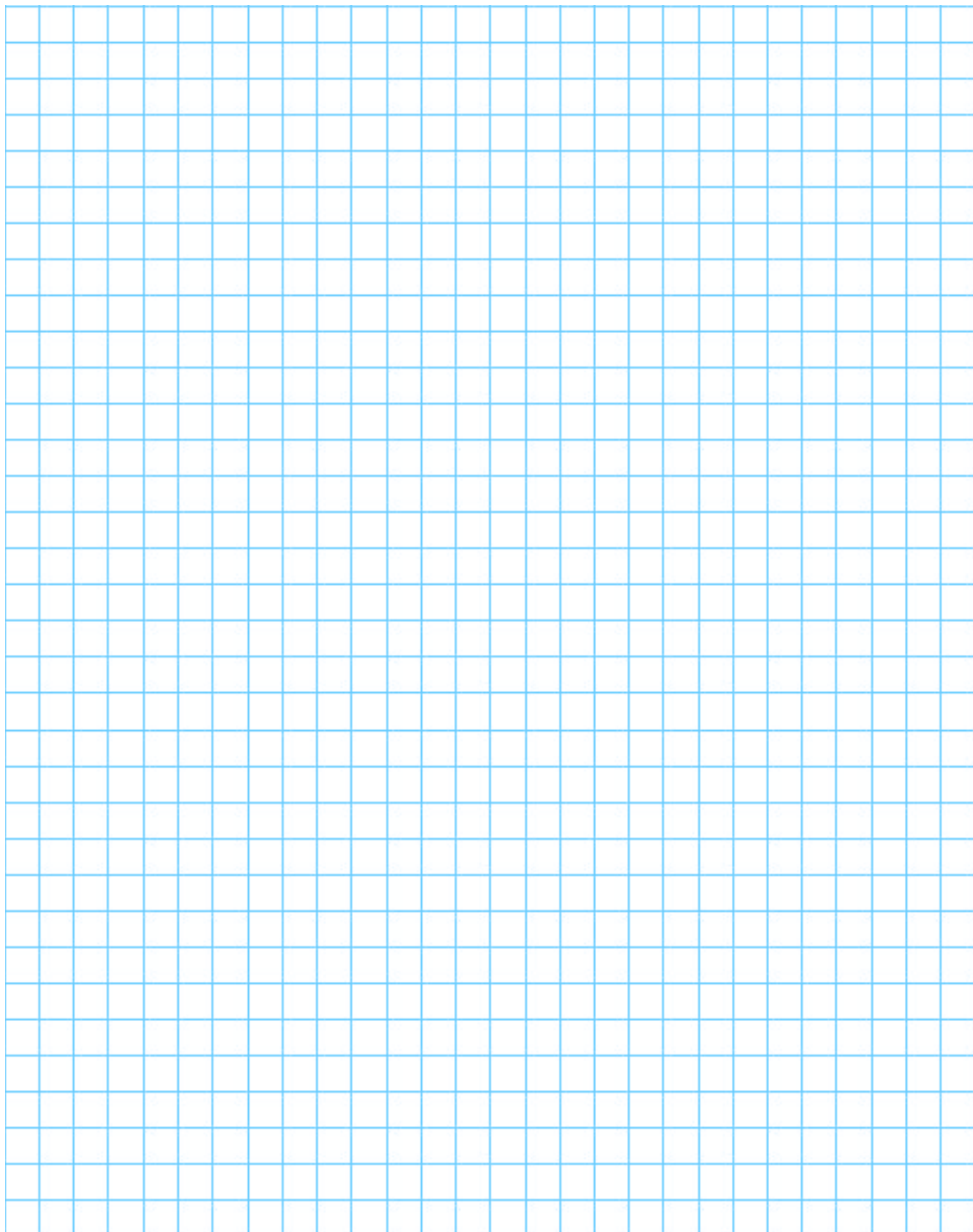
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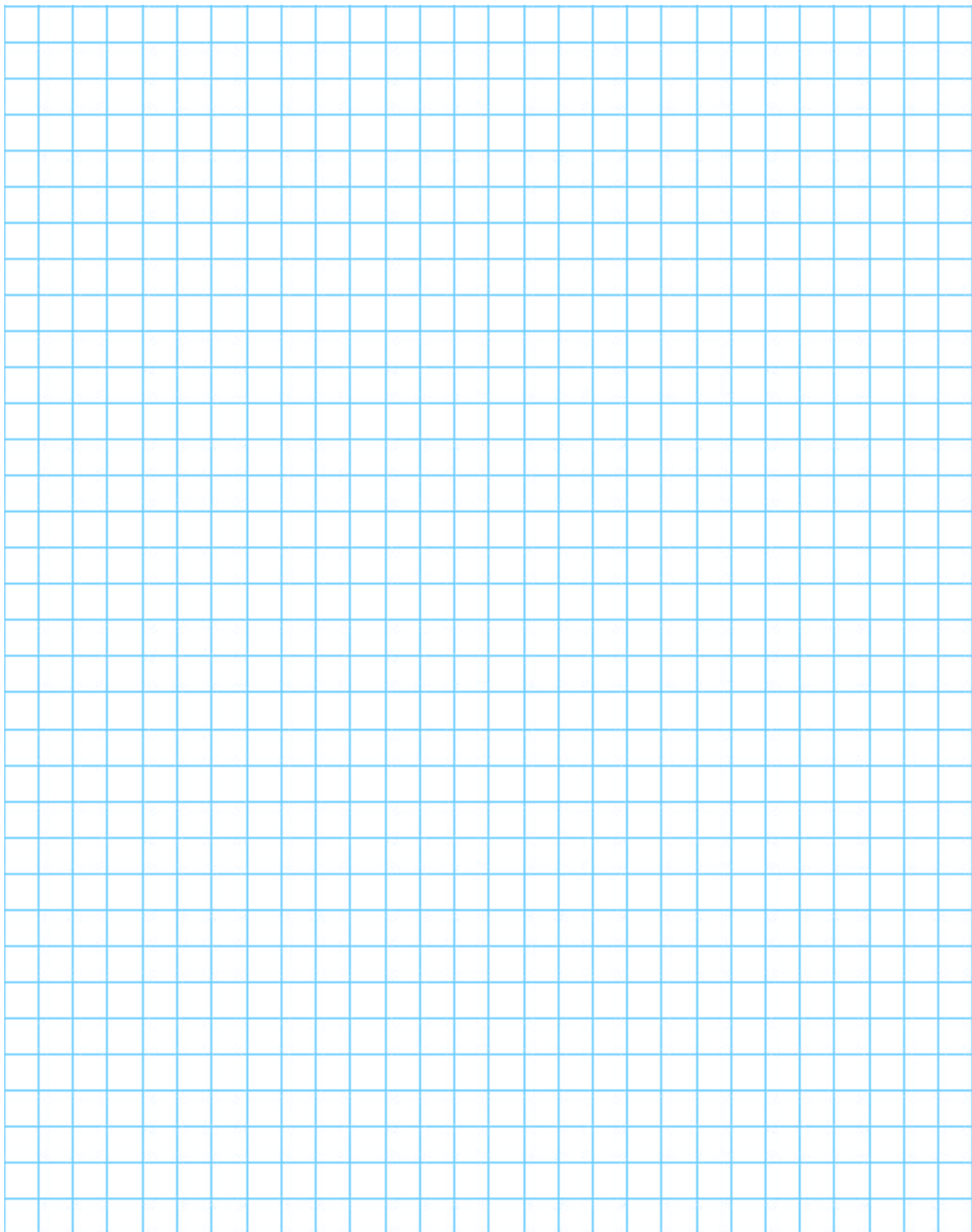




Additional working out space:



Additional working out space:

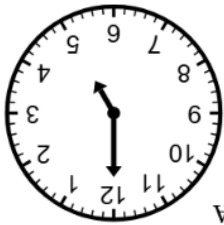
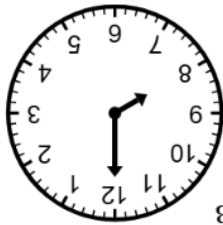
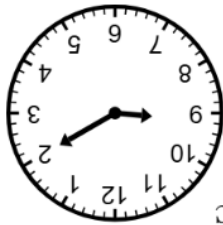
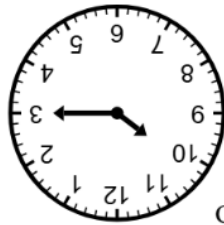
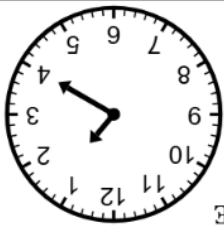
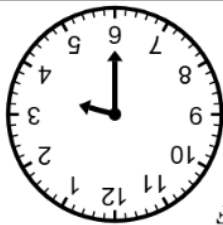
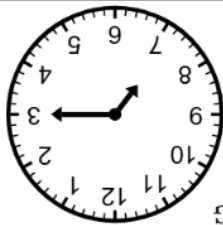
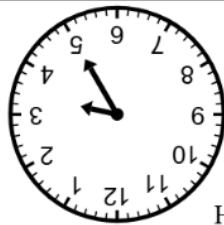


ANSWERS—WEEK 1

10	100	200	300	400
5	50	100	150	200
4	40	80	120	160
3	30	60	90	120
2	20	40	60	80
x	10	20	30	40

2	4	16	8	24	14	22	18	6	12	10	20
12	24	96	48	144	84	132	108	36	72	60	120
7	14	56	28	84	49	77	63	21	42	35	70
5	10	40	20	60	35	55	45	15	30	25	50
9	18	72	36	108	63	99	81	27	54	45	90
11	22	88	44	132	77	121	99	33	66	55	110
10	20	80	40	120	70	110	90	30	60	50	100
4	8	32	16	48	28	44	36	12	24	20	40
8	16	64	32	96	56	88	72	24	48	40	80
6	12	48	24	72	42	66	54	18	36	30	60
3	6	24	12	36	21	33	27	9	18	15	30
x	2	8	4	12	7	11	9	3	6	5	10

1. Write the correct time under each clock

 <p>A</p>	 <p>B</p>	 <p>C</p>	 <p>D</p>
 <p>E</p>	 <p>F</p>	 <p>G</p>	 <p>H</p>
5:00	8:00	9:10	10:15
1:20	3:30	7:15	3:25

Q	Question		Answer
1	$6 \times 7 = \square$		42
2	$24 \div 4 = \square$		6
3	$4 \times \square = 28$		7
4	$24 \div \square = 4$		6
5	$7 \times 6 = \square$		42
6	$18 \div 6 = \square$		3
7	$\square \times 4 = 4$		1
8	$\square \div 2 = 3$		6
9	$5 \times 7 = \square$		35
10	$54 \div 6 = \square$		9

Q	Question		Answer
1	$3 + 17$		20
2	What is double 55?		110
3	$112 + 10$		122
4	$29 - 10$		19
5	$6 = 1 + \square$		5
6	$58 - 11 = 58 - 8 - \square$		3
7	$73 + 73 = \square \times 73$		2
8	Draw hands on the clock face showing 10:10 am	See clock above	
9	$7 + 3$		10
10	$\square + 46 = 100$		54

ANSWERS—WEEK 2

6235 → <u>6</u>	8302 → <u>8</u>	1428 → <u>1</u>	389 → <u>0</u>
-----------------	-----------------	-----------------	----------------

4) Write down which digit is in the **thousands** place:

6035 → <u>0</u>	3502 → <u>5</u>	1238 → <u>2</u>	839 → <u>8</u>
-----------------	-----------------	-----------------	----------------

3) Write down which digit is in the **hundreds** place:

2743 → <u>4</u>	5194 → <u>9</u>	8320 → <u>2</u>	307 → <u>0</u>
-----------------	-----------------	-----------------	----------------

2) Write down which digit is in the **tens** place:

1267 → <u>7</u>	4235 → <u>5</u>	3190 → <u>0</u>	8302 → <u>2</u>
-----------------	-----------------	-----------------	-----------------

1) Write down which digit is in the **ones** place:

7	67 062
4	49 996
2	33 026
6	79 621
	600
	20
	40 000
	7000

What is the value of the...

2	94 023
9	12 934
4	45 170
1	61 903
	1000
	40 000
	900
	20

6	462
1	821
4	649
8	87
	80
	40
	1
	60

What is the value of the...

9	7 892
5	1 053
3	3 908
2	9 872
	2
	3000
	50
	90

1) I am a 3 digit number.

I am greater than 350.

My hundreds digit is even.

I am not a multiple of 5.

Who am I?

782	495	328	296
684	583	835	962

2) I am not a multiple of 10.

My tens digit is a multiple of 3.

If you round me to the nearest 100, I become 500.

Who am I?

427	476	562	460
528	592	530	535

Write in digits:

a) Three million and twenty two

3,000,022

b) Five hundred and eighteen thousand

518,000

c) Twenty six thousand and four

26,004

d) Ninety four million, three thousand and six

94,003,006

e) Four million, two hundred and three thousand

4,203,000

f) Three hundred and six thousand and thirty nine

306,039

ANSWERS—WEEK 4

10	500	200	600	300
5	250	100	300	150
4	200	80	240	120
3	150	60	180	90
2	100	40	120	60
x	50	20	60	30

10	70	20	120	40	60	80	110	30	50	90	100
6	42	12	72	24	36	48	66	18	30	54	60
3	21	6	36	12	18	24	33	9	15	27	30
9	63	18	108	36	54	72	99	27	45	81	90
11	77	22	132	44	66	88	121	33	55	99	110
8	56	16	96	32	48	64	88	24	40	72	80
5	35	10	60	20	30	40	55	15	25	45	50
2	14	4	24	8	12	16	22	6	10	18	20
12	84	24	144	48	72	96	132	36	60	108	120
7	49	14	84	28	42	56	77	21	35	63	70
4	28	8	48	16	24	32	44	12	20	36	40
x	7	2	12	4	6	8	11	3	5	9	10

Calculate the following. The answers are all integers:

a) $448 \div 8$ **56** c) $468 \div 9$ **52** e) $639 \div 9$ **71**

b) $2766 \div 6$ **461** d) $665 \div 5$ **133** f) $20,095 \div 5$ **4019**

Calculate the following. The answers are all decimals:

a) $100 \div 8$ **12.5** c) $211 \div 5$ **42.2** e) $941 \div 5$ **188.2**

ANSWERS—WEEK 5

a) Work out the mode: 7 6 7 4 12 11 6 $Mode = 7$ X The number 6 also appears twice, so there are two modes : 6 and 7	c) Work out the median: 0.9 0.9 0.9 1.3 1.3 1.3 $Median = 0.9$ and 1.3 X With two middle numbers, add and then divide by 2 to find the median (1.1)
b) Work out the median: 48 61 48 55 54 49 54 $Median = 55$ X The numbers are not in order . The median is 54	d) Work out the range: 78 82 83 87 93 96 $Range = 96 - 78 = 22$ X The correct answer to the subtraction is 18 , not 22.

What's wrong?
Harry has tried to work out some averages and ranges, but has got all of them wrong!
Work out what is wrong with each of Harry's answers.

a) 9 4 6 6 4 7 6 2 Mode 6	b) 34 36 43 41 34 Median 36
c) 2 3 4 4 4 5 6 7 Range 5	d) 2 3 6 7 7 8 Mean 5.5
e) 21 15 19 31 32 19 Median 20	f) 320 331 327 313 326 Range 18
g) 24 15 16 24 17 Mean 19.2	h) 35 30 26 36 17 25 Mode No mode

For each set of data, work out the average or range:

True or False?	Averages and Range
----------------	--------------------

For each statement, circle the correct response.

1	4, 2, 8, 3, 9	The range is 5	True	False
2	5, 7, 8, 11, 12	The median is 8	True	False
3	9, 6, 6, 3, 4	The mode is 6	True	False
4	10, 1, 9, 4	The mean is 6	True	False
5	5, 6, 6, 8, 8, 9	The median is 6 and 8	True	False
6	1, 2, 3, 5, 6, 9	The median is 4	True	False
7	2, 3, 4	The mean, mode and median are all 3	True	False
8	5, 8, 2, 6, 3	There is no mode	True	False
9	8, 11, 6, 4, 6	The mean and the range are the same	True	False

ANSWERS—WEEK 7

Q	Question	Answer
1	$6 \times 2 = \square$	12
2	$36 \div 6 = \square$	6
3	$5 \times \square = 15$	3
4	$56 \div \square = 7$	8
5	$3 \times 9 = \square$	27
6	$5 \div 5 = \square$	1
7	$\square \times 9 = 9$	1
8	$\square \div 6 = 3$	18
9	$8 \times 3 = \square$	24
10	$18 \div 3 = \square$	6

Q	Question	Answer
1	$\square + 7 = 10$	3
2	What is double 9?	18
3	Halve 40	20
4	$111 + 30$	141
5	$66 + 63$	129
6	$17 + 9 = 17 + 3 + \square$	6
7	$3 + 468$	471
8	$33 + 70 = 30 + 70 + \square$	3
9	Double 58	116
10	What is half of 7?	3.5



MONEY RIDDLES 1 ANSWERS

Use the clues to find the correct set of coins from the eight possibilities.

CHALLENGE A

- I am more than 10 pence.
- I am less than 20 pence.
- I have fewer than 3 coins.
- I make an even number of pence.

Who am I? Answer: 1) 12p

£ 102.70

£ 120.07

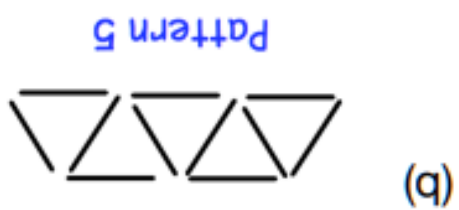
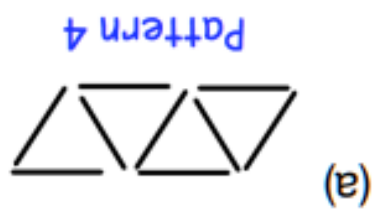
i Non-standard notation

Condone any unambiguous notation
eg, for the first mark accept
• £ 102 = 70

ANSWERS—WEEK 8

(d) 21 sticks

(c) 13 sticks



Exercise 6

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

a) 9, 11, 13, 15, 17, 19, 21

b) 128, 125, 122, 119, 116, 113

c) 15, 10, 5, 0, -5, -10

d) 2.3, 2.5, 2.7, 2.9, 3.1, 3.3

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

a) 17, 15, 13, 11, 9, 7, 5, 3, 1

b) -10, -7, -4, -1, 2, 5, 8, 11, 14

ANSWERS—WEEK 9

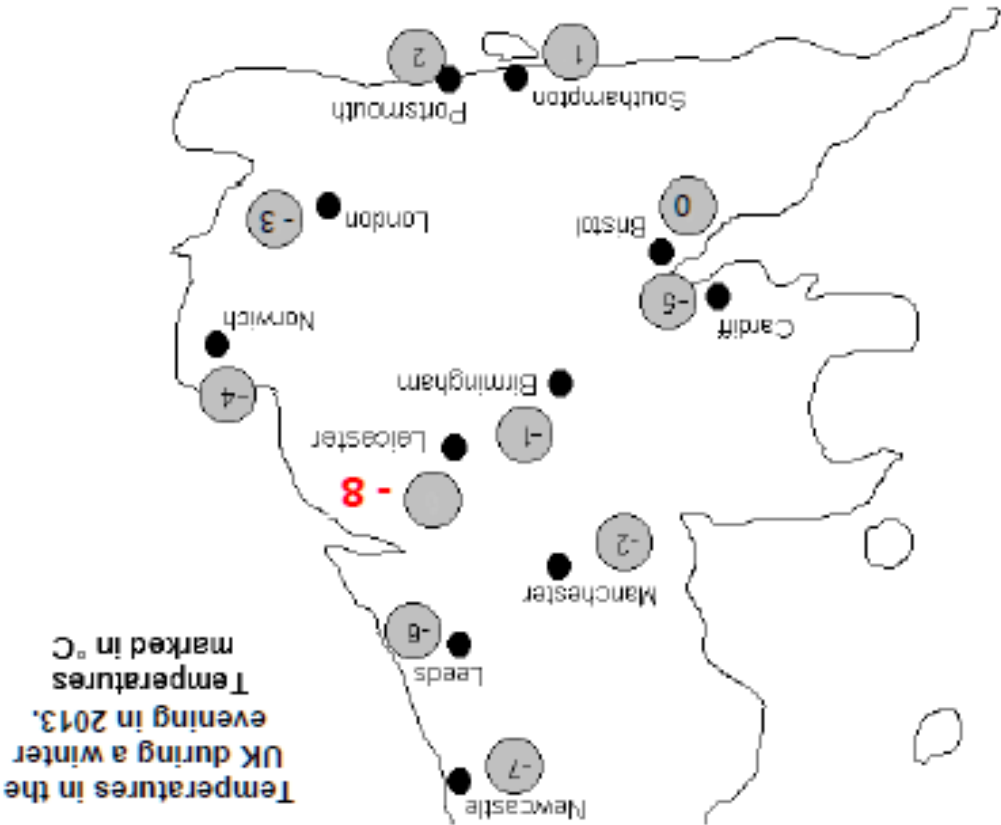
- 4) The following evening the temperature in Manchester fell by 6°C . What was the temperature in Manchester the following evening? -8°C
- 3) The temperature in Leicester was 10°C lower than the temperature in Portsmouth. Include the temperature of Leicester on the map. -8°C
- 2) Work out the difference between the highest and lowest temperature. 9°C
- 1) Which city was the coldest that evening? Newcastle

Section B: Use the temperatures above to answer the following questions.

Newcastle or Leeds	Leeds
Birmingham or Cardiff	Birmingham
Manchester or Bristol	Bristol
Portsmouth or London	Portsmouth
Cardiff or Southampton	Southampton
Which city is warmer?	Which city is colder?

Birmingham or Bristol	Birmingham
Manchester or London	London
Cardiff or Leeds	Leeds
Bristol or Portsmouth	Bristol
Southampton or Leeds	Leeds
Which city is warmer?	Which city is colder?

Section A: Decide which city is warmer or colder.



1. The table shows the minimum and maximum daily temperatures in six cities in the USA in January.

City	Minimum °C	Maximum °C
New York	0°C	10°C
Los Angeles	8°C	18°C
Chicago	-4°C	8°C
Houston	11°C	20°C
Boston	-2°C	13°C
Anchorage	-12°C	-5°C

(a) Which city recorded the lowest **minimum** temperature?

(1) *Anchorage*

(b) What is the difference in °C between Boston's minimum and maximum temperature?

(1) *15*

(c) What is the difference in °C between Anchorage's minimum and maximum temperature?

(1) *7*

ANSWERS—WEEK 10

Q	Question	Answer
1	$6 \times 6 = \square$	36
2	$2 \div 2 = \square$	1
3	$6 \times \square = 12$	2
4	$40 \div \square = 5$	8
5	$1 \times 9 = \square$	9
6	$40 \div 8 = \square$	5
7	$\square \times 7 = 49$	7
8	$\square \div 3 = 1$	3
9	$2 \times 2 = \square$	4
10	$48 \div 6 = \square$	8

Q	Question	Answer
1	$1 + \square = 20$	19
2	Double 54	108
3	$22 + 10$	32
4	$44 - 40$	4
5	$7 = 2 + \square$	5
6	$75 - 11 = 75 - 5 - \square$	6
7	$6 + 6 + 6 + 6 + 6 = 6 \times \square$	5
8	What is the time on the clock?	4:50 pm
9	Double 7	14
10	What is half of 44?	22

MONEY RIDDLES 2 ANSWERS



CHALLENGE A

- I am more than 20 pence.
- All my coins are the same color.
- All of my coins have the same value.
- I am less than 50 pence.

Who am I? **Answer: 1) 40p**



1. Round these numbers to the nearest 10:

a) 64 **60** c) 108 **110** e) 15 **20** g) 775 **780**

b) 92 **90** d) 203 **200** f) 596 **600** h) 1025 **1030**

2. Round these numbers to the nearest 100:

a) 556 **600** c) 76 **100** e) 3045 **3000** g) 14,250 **14,300**

b) 289 **300** d) 1450 **1500** f) 56,980 **57,000** h) 7,500 **7,500**

3. True or false: 426 rounded to the nearest hundred is 500 **False**

4. True or false: 91 rounded to the nearest hundred is 100 **True**

5. True or false: 19 rounded to the nearest 100 is 0 **True**

ANSWERS—WEEK 11

B1 Find the value x

$6x = 119$

A1 Find the value x

$x = 118$

8 Which of these is impossible?

A triangle with 3 acute angles	A triangle with a reflex angle
A triangle with an obtuse angle	A triangle with a right angle

a)
equilateral

b)
isosceles

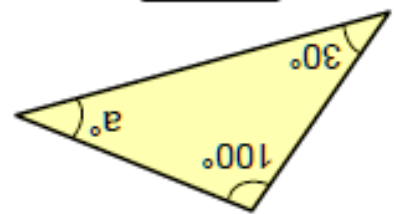
c)
scalene

d)
isosceles

1. Label these angles as acute, right, obtuse or reflex:

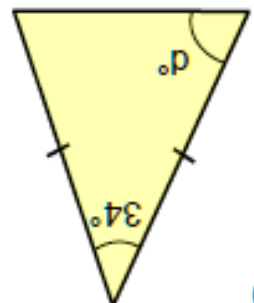
 acute	 reflex
 obtuse	 right

Section A



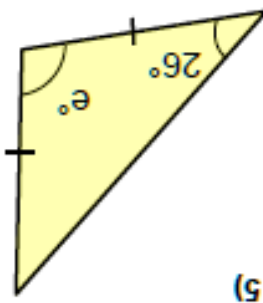
$a = 50^\circ$

$d = 73^\circ$



5)

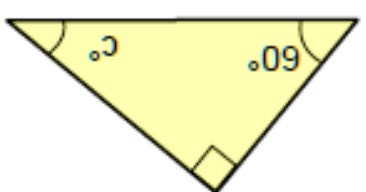
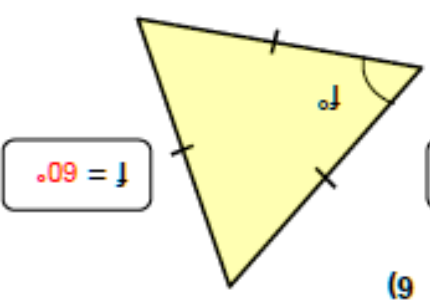
$b = 85^\circ$



$e = 128^\circ$

6)

$c = 30^\circ$



EXTRA SUPPORT

If you need help with completing your homework, please use the Mathswatch clips in the LOOK boxes first. 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
10Ticks

