

Benjamin Britten Academy of Music and Mathematics

MATHEMATICS HOMEWORK BOOKLET

Year 7 Book C
SPRING TERM



NAME:



How does it work?

- One homework will be set a week
- The set and 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 a website, you need to see your class teacher
- If you need help with the homework task, you must speak to your teacher before the due date

CONTENTS

| WEEK | HOMEWORK TITLE |
|------|-----------------|
| 1 | Numeracy |
| 2 | Place Value |
| 3 | Research task |
| 4 | Numeracy |
| 5 | Averages |
| 6 | Mathswatch |
| 7 | Numeracy |
| 8 | Sequences |
| 9 | Real life maths |
| 10 | Numeracy |
| 11 | Substitution |
| 12 | Mathswatch |

Log in details:

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

Mathswatch

Username—firstnamelastname@benjamin

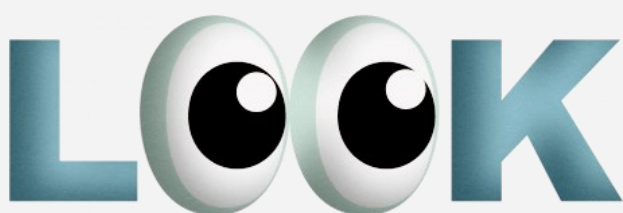
Password—your DOB (format: monthDYYYY)

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 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.



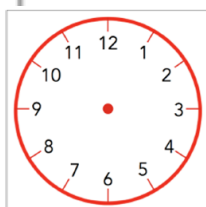


HOMEWORK 1: NUMERACY

Recall and Recap

MENTAL STRATEGIES -
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 | | |



TIMESTABLES -
do these in your head

| 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 | | |

Problem solving!

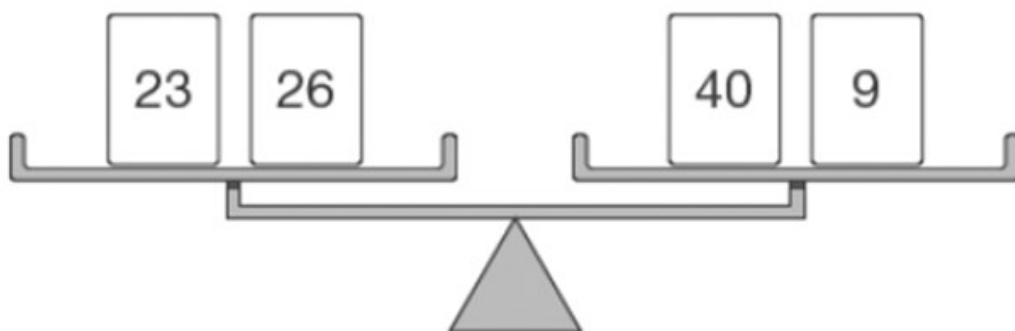
Apply your core skills to the challenge question below...

LOOK

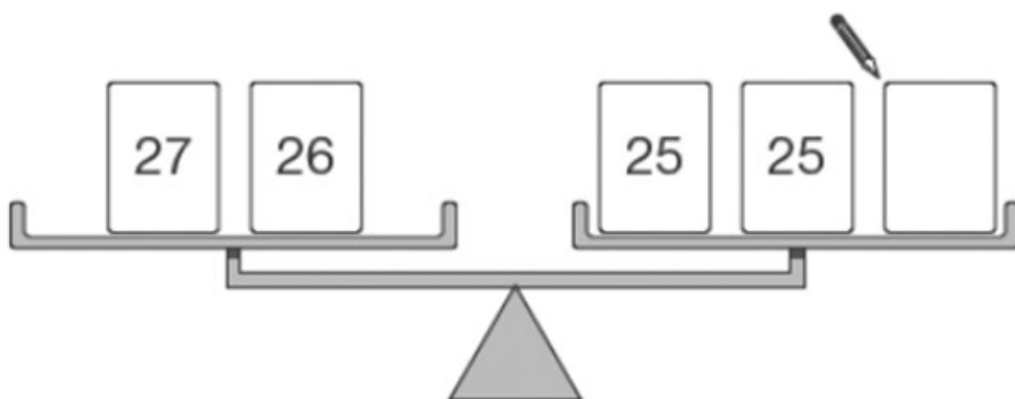
N₃, N₂₄

Scale balance

The numbers on these scales balance.



Write the missing number so that these scales balance.





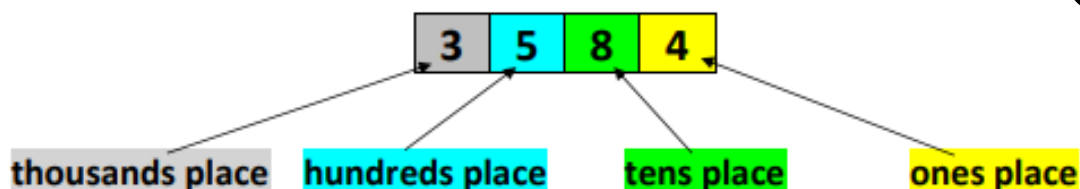
HOMework 2: PLACE VALUE

LOOK

A6, A7, A10,
A17

Core skills...

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:

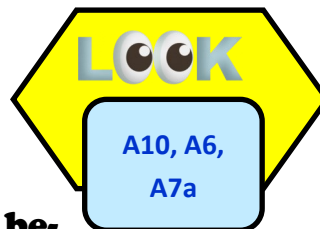
| | | | |
|--------|--------|--------|-------|
| 6035 → | 3502 → | 1238 → | 839 → |
|--------|--------|--------|-------|

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

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

Applying your skills

- 1) $1000 + 300 + 20 + 6 =$ _____
- 2) $2000 + 100 + 60 + 4 =$ _____
- 3) $4000 + 500 + 20 + 3 =$ _____
- 4) $7000 + 100 + 30 + 9 =$ _____
- 5) $5000 + 600 + 80 + 3 =$ _____



Problem solving!

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

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?

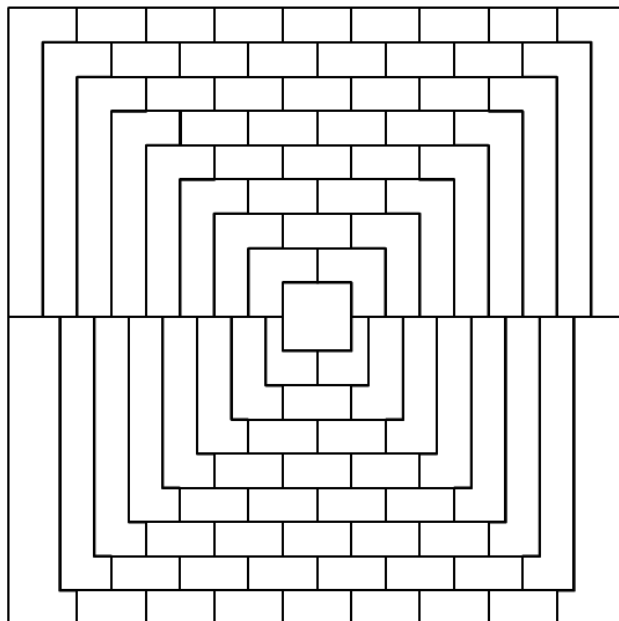
| | | | |
|-----|-----|-----|-----|
| 427 | 476 | 562 | 460 |
| 528 | 592 | 530 | 535 |



HOMEWORK 3: FOUR COLOUR THEOREM

Part A

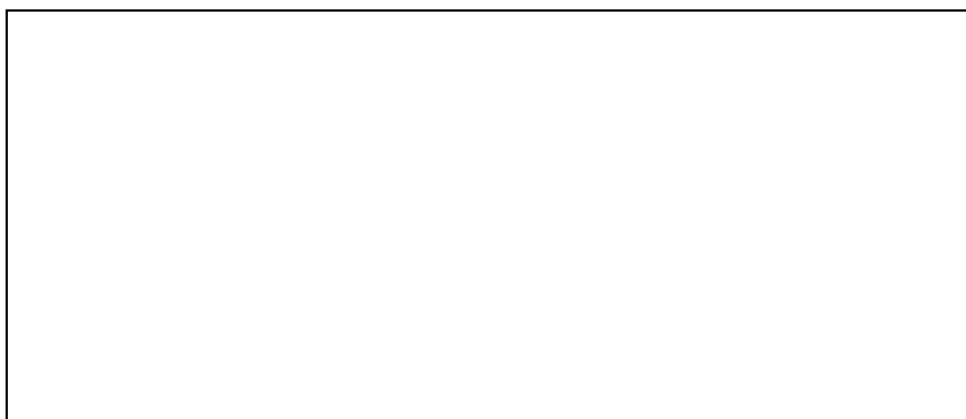
Colour in the pattern so that no areas which touch have the same colour. Try to use the least number of different colours possible.



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

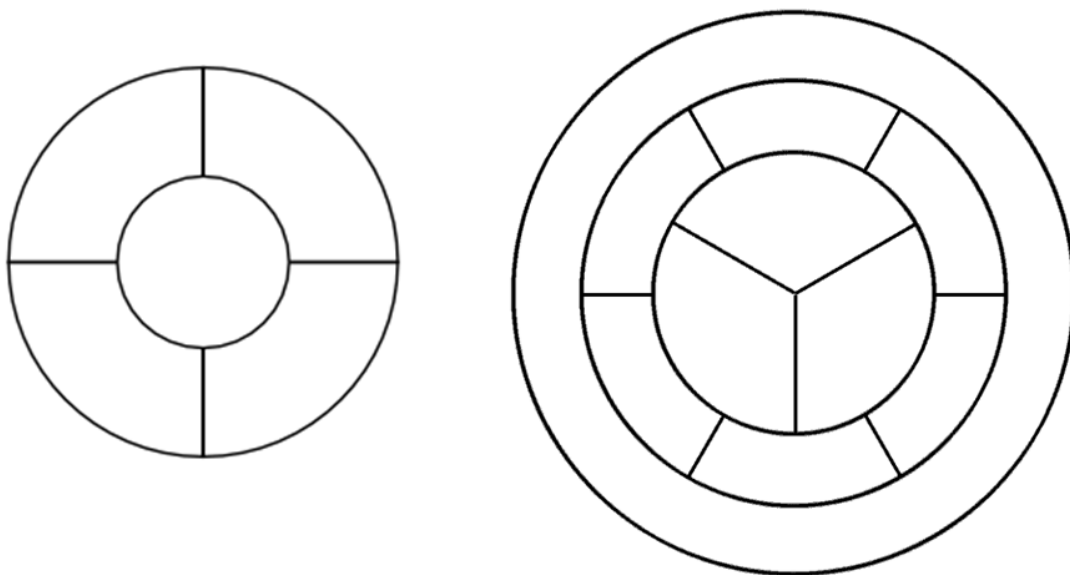
Part B

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

Recall and Recap

MENTAL STRATEGIES -
do these in your head

| Q | Question | Answer |
|-----------------|--|--------|
| 1 | $\square + 3 = 5$ | |
| 2 | $68 + \square = 100$ | |
| 3 | What is half of 4? | |
| 4 | $189 - 10$ | |
| 5 | $161 + \square = 240$ | |
| 6 | $74 = 24 + \square$ | |
| 7 | $629 - 627$ | |
| 8 | $9 \times 5 = 45$, so $45 \div 9 = \square$ | |
| 9 | Write 8:23 am in 24 hour clock format | |
| 10 | 2:15 pm is how many minutes after 2:05 pm? | |
| Total out of 10 | | |

TIMESTABLES -
do these in your head

| Q | Question | Answer |
|-----------------|-------------------------|--------|
| 1 | $5 \times 1 = \square$ | |
| 2 | $24 \div 8 = \square$ | |
| 3 | $5 \times \square = 30$ | |
| 4 | $45 \div \square = 9$ | |
| 5 | $6 \times 1 = \square$ | |
| 6 | $40 \div 4 = \square$ | |
| 7 | $\square \times 1 = 10$ | |
| 8 | $\square \div 3 = 9$ | |
| 9 | $6 \times 4 = \square$ | |
| 10 | $2 \div 2 = \square$ | |
| Total out of 10 | | |

Problem solving!

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

Temperature

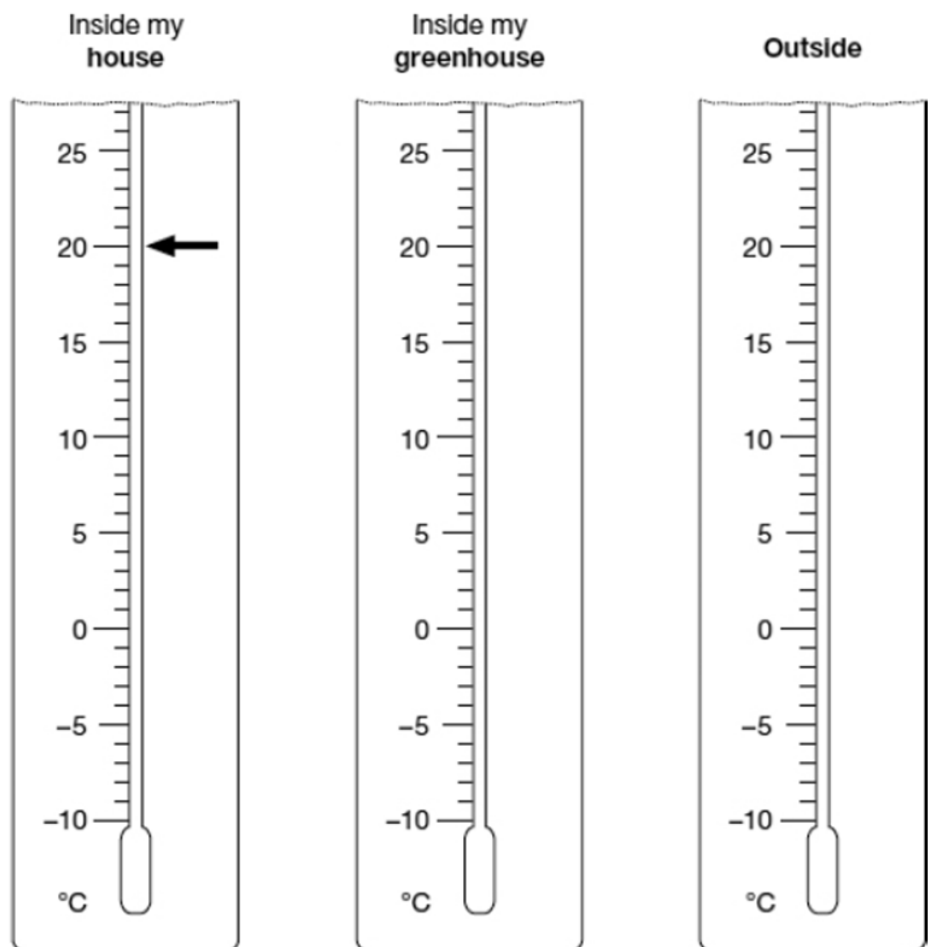
The table shows some temperatures for one day in winter.

| Place | Temperature |
|----------------------|-------------|
| Inside my house | 20°C |
| Inside my greenhouse | 8°C |
| Outside | -2°C |



Draw arrows on the diagrams below to show these temperatures.

The first one is done for you.





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.

Applying your skills

| | | |
|----------|------------------|-----------------|
| 1 | Find the range: | 8 6 9 5 5 11 7 |
| 2 | Find the mode: | 7 5 7 4 6 7 2 4 |
| 3 | Find the median: | 6 7 9 12 13 |
| 4 | Find the mode: | 8 5 6 2 6 5 7 |
| 5 | Find the median: | 8 4 2 6 5 11 |

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.

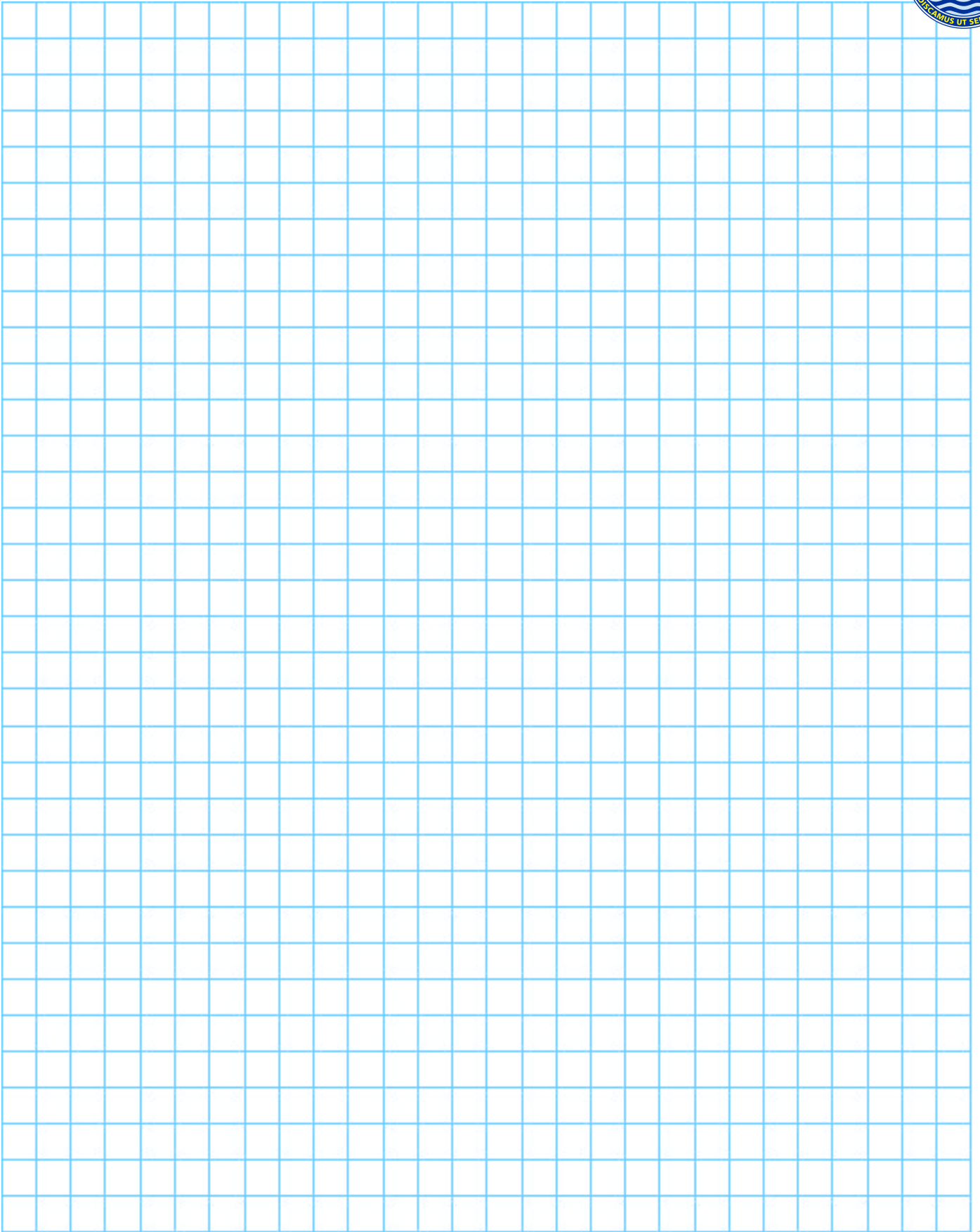
If you have any issues logging in, you must speak to your class teacher as soon as possible.

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.

Additional working out space:





HOMEWORK 7: NUMERACY

Recall and Recap

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 | | |



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

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

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



HOMEWORK 8: SEQUENCES

Recall and Recap:

Fill in the boxes to complete the sequence and give the rule for each:

Q1) 4, 12, 20, , ,

Q2) 4, 10, 16, , ,

Q3) 5, 9, 13, , ,

Q4) 2, 6, 10, , ,

Q5) 7, 10, 13, , ,

Q6) 46, 43, 40, , ,

Write the rules here:

Think hard...



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?



Problem solving!

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

- . The numbers in this sequence decrease by the same amount each time

Write the next two numbers

70 63 56 49

-
- . The numbers in this sequence increase by 13 each time

Write in the two missing numbers

101

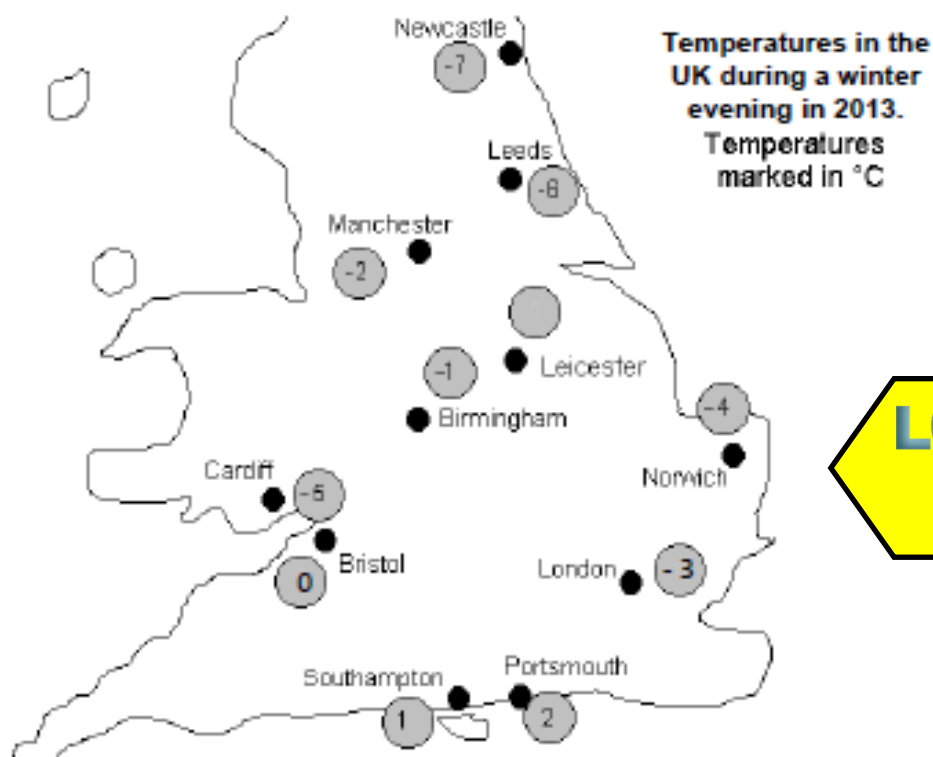
114

127

140



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 |



(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?

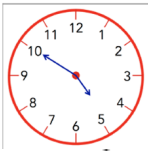
.....°C
(1)



HOMEWORK 10: NUMERACY

Recall and Recap

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 | | |

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 to the nearest hundred is 100

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



HOMEWORK 11: SUBSTITUTION

Recall and Recap:

Given that $a = 3$, evaluate:

a) $10a$

e) $4a + 2$

i) $5 - a$

b) a^2

f) $7 + a$

j) a^3

c) $\frac{a}{3}$

g) $7a$

k) $4 + 2a$

d) $5a - 1$

h) $2a + 5$

l) $3a - 2$

LOOK

G20

If $a = 7$ $b = 10$ $c = 3$ $d = 8$ and $e = 15$

Find the value of each expression.

(a) $a + 5$

(b) $b - 4$

(c) $c + d$

(d) $e - d$

(e) $2a$

(f) $4b$

(g) $3e$

(h) $5c$



Problem solving!

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

$$n = 7$$



What is $n + 4$?

$$w = 4$$

What is $3w - 2$?

$$c = 9$$

What is $2c + 5$?



HOMEWORK 12: 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.

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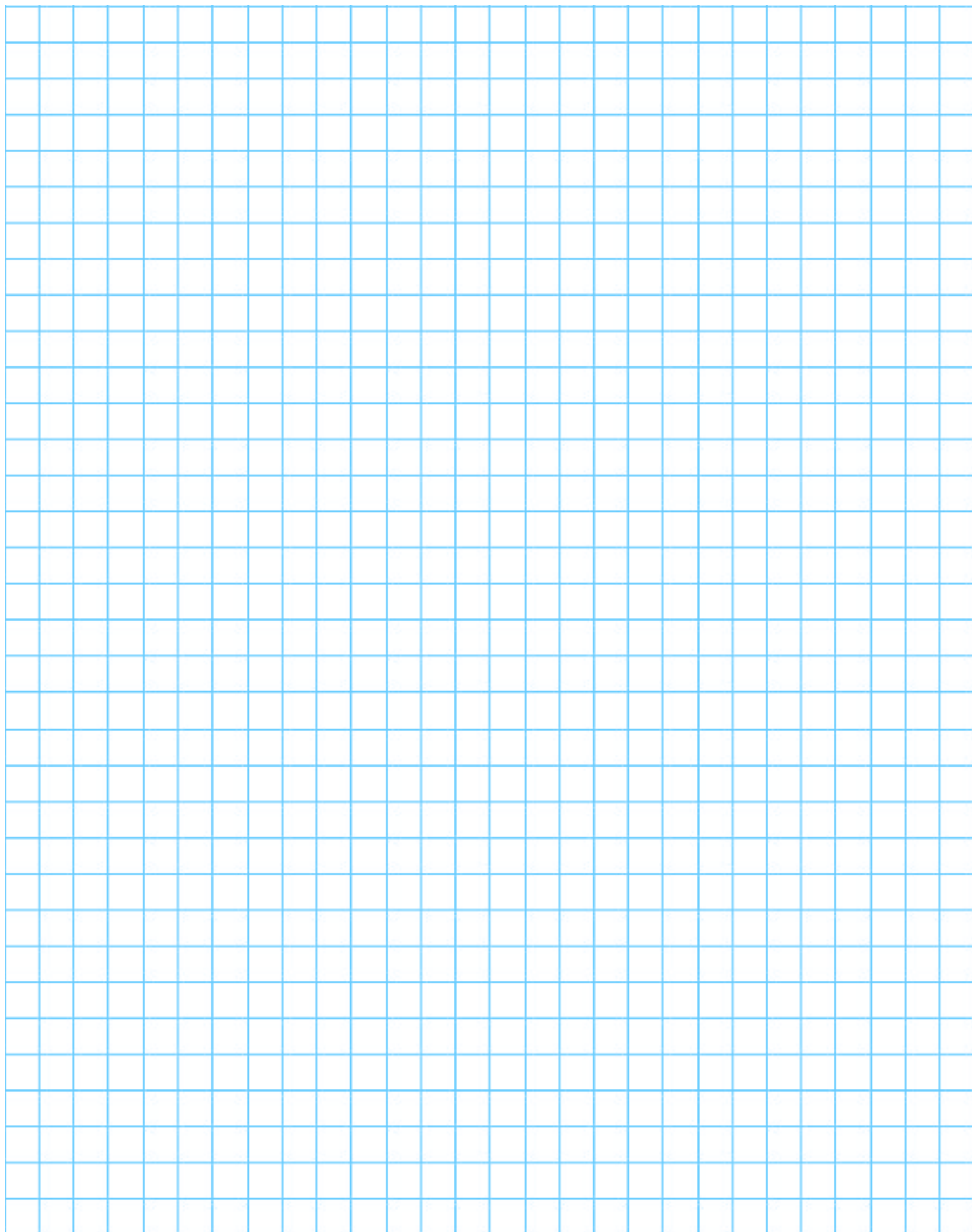
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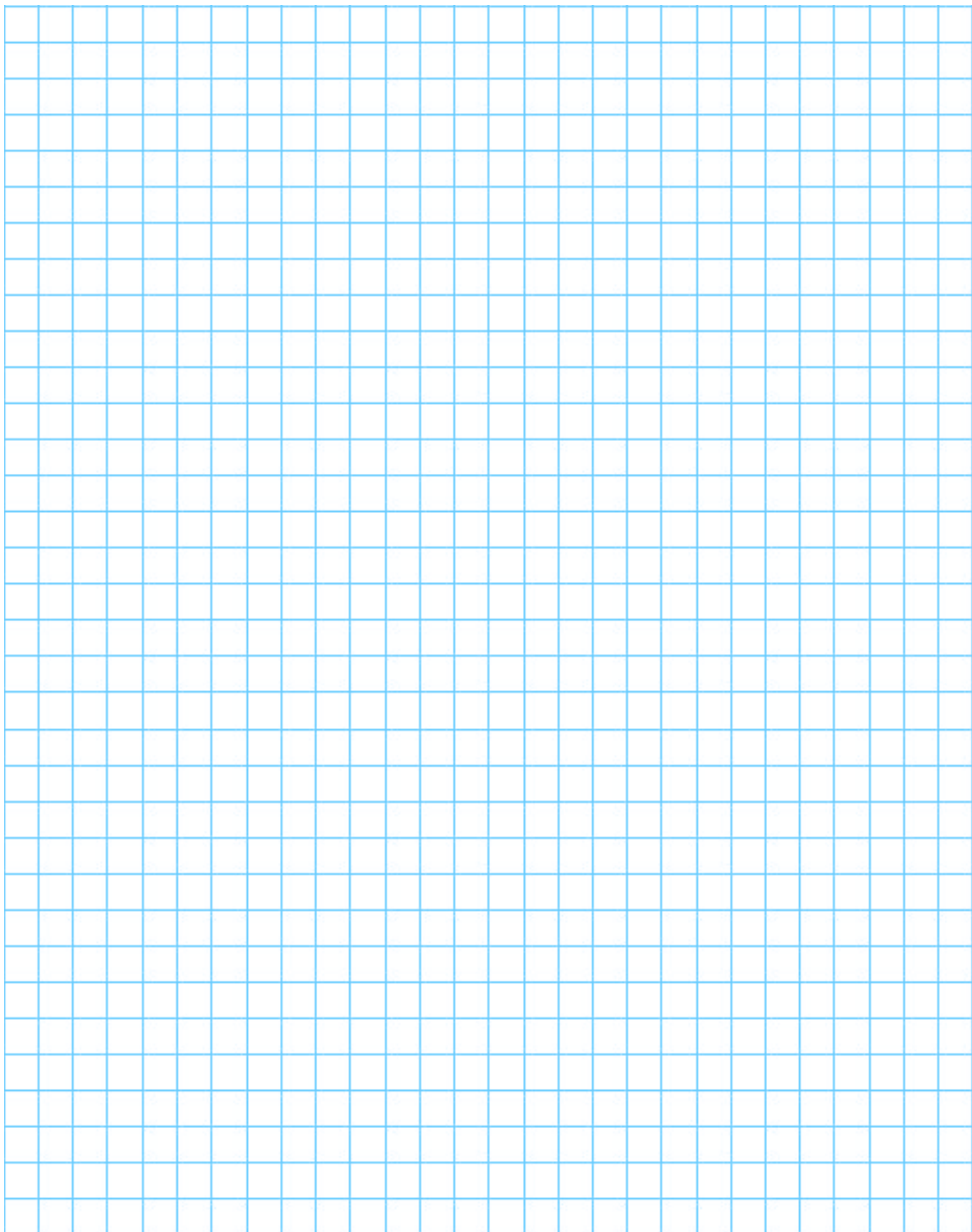
[illegible]



Additional working out space:



Additional working out space:



ANSWERS—WEEK 1

| | | |
|----------|---|-----------------|
| 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 |

| | | |
|----------|-------------------------|---------------|
| 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 |



ANSWERS—WEEK 2

$$\begin{array}{rcl}
 1) & 1000 + 300 + 20 + 6 & = \underline{1326} \\
 2) & 2000 + 100 + 60 + 4 & = \underline{2164} \\
 3) & 4000 + 500 + 20 + 3 & = \underline{4523} \\
 4) & 7000 + 100 + 30 + 9 & = \underline{7139} \\
 5) & 5000 + 600 + 80 + 3 & = \underline{5683}
 \end{array}$$

| | | | |
|-----------------|-----------------|-----------------|----------------|
| 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:

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 | 583 | 684 |
| 296 | 328 | 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 | 592 | 528 |
| 460 | 562 | 530 | 535 |

ANSWERS—WEEK 4

| Q | Question | Answer |
|----|-------------------------|--------|
| 1 | $5 \times 1 = \square$ | 5 |
| 2 | $24 \div 8 = \square$ | 3 |
| 3 | $5 \times \square = 30$ | 6 |
| 4 | $45 \div \square = 9$ | 5 |
| 5 | $6 \times 1 = \square$ | 6 |
| 6 | $40 \div 4 = \square$ | 10 |
| 7 | $\square \times 1 = 10$ | 10 |
| 8 | $\square \div 3 = 9$ | 27 |
| 9 | $6 \times 4 = \square$ | 24 |
| 10 | $2 \div 2 = \square$ | 1 |

| Q | Question | Answer |
|----|--|--------|
| 1 | $\square + 3 = 5$ | 2 |
| 2 | $68 + \square = 100$ | 32 |
| 3 | What is half of 4? | 2 |
| 4 | $189 - 10$ | 179 |
| 5 | $161 + \square = 240$ | 79 |
| 6 | $74 = 24 + \square$ | 50 |
| 7 | $629 - 627$ | 2 |
| 8 | $9 \times 5 = 45$, so $45 \div 9 = \square$ | 5 |
| 9 | Write 8:23 am in 24 hour clock format | 08:23 |
| 10 | 2:15 pm is how many minutes after 2:05 pm? | 10 |

[2]

1

Indicates 8 on the second thermometer
i Inaccurate indication
 Accept provided the indication is nearer to
 the correct integer than either of the
 neighbouring integers
 Indicates -2 on the third thermometer
**i Responses for the second and third
 thermometers transposed but otherwise
 correct**
 Mark as 0, 1

1

ANSWERS—WEEK 5

| | | |
|---|------------------|-----------------|
| 5 | Find the median: | 8 4 2 6 5 11 |
| 4 | Find the mode: | 8 5 6 2 6 5 7 |
| 3 | Find the median: | 6 7 9 12 13 |
| 2 | Find the mode: | 7 5 7 4 6 7 2 4 |
| 1 | Find the range: | 8 6 9 5 5 11 7 |
| A | B | 5.5 |
| B | | 9 |
| C | | 0.5 |
| D | | 2 |
| E | | 2.1 |

| | |
|----------------|--------------------|
| 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 |

£ 120.07

£ 102.70

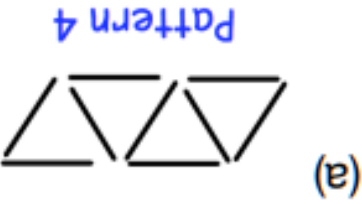
i

Non-standard notation

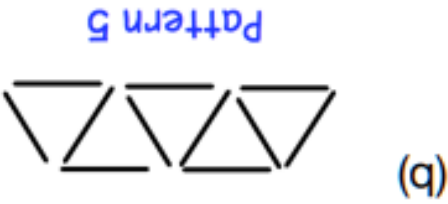
Condone any unambiguous notation
eg, for the first mark accept
• £ 102 = 70

ANSWERS—WEEK 8

| | |
|----------------|------------------|
| Q1) 28, 36, 44 | Rule: Add 8 |
| Q2) 22, 28, 34 | Rule: Add 6 |
| Q3) 17, 21, 25 | Rule: Add 4 |
| Q4) 14, 18, 22 | Rule: Add 4 |
| Q5) 16, 19, 22 | Rule: Add 3 |
| Q6) 37, 34, 31 | Rule: Subtract 3 |



- (c) 13 sticks
- (d) 21 sticks



88

101

114

127

140

153

Write in the two missing numbers

The numbers in this sequence increase by 13 each time

70

63

56

49

42

35

Write the next two numbers

The numbers in this sequence decrease by the same amount each time

ANSWERS—WEEK 9

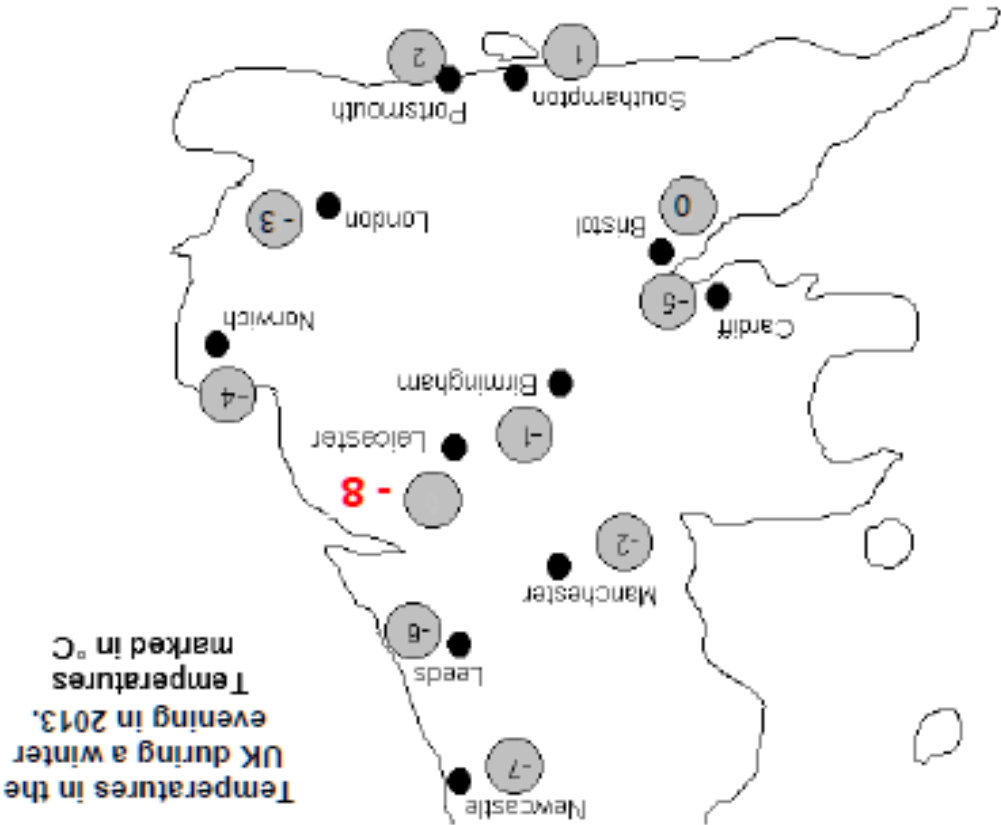
- 4) The following evening the temperature in Manchester fell by 6°C . What was the temperature in Manchester the following evening? -8°C
- 3) The temperature in Leicester was 10°C lower than the temperature in Portsmouth. Include the temperature of Leicester on the map. -8°C
- 2) Work out the difference 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? | |

| | |
|-----------------------|------------|
| Birmingham or Bristol | Birmingham |
| Manchester or London | London |
| Cardiff or Leeds | Leeds |
| Bristol or Portsmouth | Bristol |
| Southampton or Leeds | Leeds |
| 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 |

1. Round these numbers to the nearest 10:

| | | | |
|--------|-----|--------|-----|
| a) 64 | 60 | c) 108 | 110 |
| e) 15 | 20 | | |
| g) 775 | 780 | | |
2. Round these numbers to the nearest 100:

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

- | | | | |
|-----------|--------|-------|-----|
| 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 | | |

ANSWERS—WEEK 11

- (a) 12 (b) 6 (c) 11 (d) 7
(e) 14 (f) 40 (g) 45 (h) 15

- a) $10a$ 30
b) a^2 9
c) $\frac{3}{a}$ 1
d) $5a - 1$ 14
e) $4a + 2$ 14
f) $7 + a$ 10
g) $7a$ 21
h) $2a + 5$ 11
i) $5 - a$ 2
j) a^3 27
k) $4 + 2a$ 10
l) $3a - 2$ 7

Given that $a = 3$, evaluate:

1. $n = 7$

What is $n + 4$?

$$7 + 4$$

11

2. $w = 4$

What is $3w - 2$?

$$3 \times 4 - 2$$

$$12 - 2 = 10$$

10

3. $c = 9$

What is $2c + 5$?

$$2 \times 9 + 5$$

$$18 + 5 = 23$$

23

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

