

Benjamin Britten Academy of Music and Mathematics

MATHEMATICS HOMEWORK BOOKLET

Year 7 Book B
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
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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

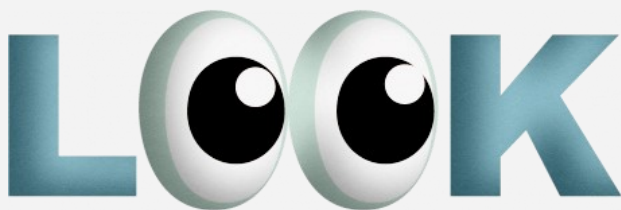
Password—your DOB (format: monthDYyyy)

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

Literacy challenge – Missing vowels!

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

BR _ CK _ TS

PR _ D _ CT

C _ _ RD _ N _ T _ S

Quick maths!

★★		★★★	
B1	$8231 + 8329$	C1	$515.3 - 1.654$
B2	$1216 \div 16$	C2	$1.615 \div 0.17$
B3	$3682 + 1346$	C3	$760.3 - 0.534$
B4	$2702 + 4229$	C4	$392.7 + 0.3672$
B5	$6074 + 7459$	C5	$892.9 + 5.414$
B6	$1155 \div 15$	C6	$9.18 \div 1.7$
B7	$7501 - 7083$	C7	$0.91 \div 1.3$
B8	87×863	C8	$78.03 - 4.592$
B9	$2779 + 9245$	C9	$0.5368 + 0.7958$
B10	75×467	C10	$377.4 + 179.5$

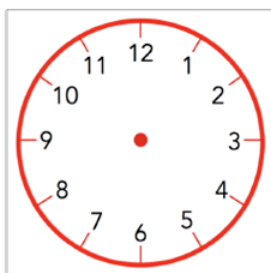
Recall and Recap

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		



KEY SKILLS - you may use written calculations for these questions

Q	Question	Answer
1	$481 + 1429$	
2	$(9 - 5)^2 + 3 \times 4$	
3	Write One Thousand and Thirty Two in digits	
4	$0.35 \div 100$	
5	$(-6) \times (-10)$	
6	Round 81.4358 to 2 d.p.	
7	$(-5) + (-5)$	
8	Round 21 to 2 s.f.	
9	Letter at (0, -1) 	
10	$1/4 = 3/\square$	
Total out of 10		

HW
1

LOOK

N7b, N20, N19,
A1



Problem solving!

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



Runners

Lily finished **2nd** out of **8 runners** in a race.

How many runners finished the race **after** Lily?

.....

1 mark

Max was in a **different** race.

7 runners finished the race **before** Max.

3 runners finished the race **after** Max.

Altogether, how many runners finished the race?

.....

1 mark



HOMEWORK 2: PLACE VALUE

Let's start with the basics...

Write down these numbers in standard form.

Example 7 ten thousands + 3 thousands + 8 tens + 4 ones = 73,084

1) 8 thousands + 7 hundreds + 4 tens + 5 ones =

2) 5 thousands + 2 hundreds + 9 tens + 3 ones =

3) 4 ten thousands + 7 thousands + 3 hundreds =

4) 2 ten thousands + 8 hundreds + 5 tens + 9 ones =

5) 7 ten thousands + 2 thousands + 8 tens + 2 ones =

LOOK

A6, A7, A10,
A17

Applying your skills

Bronze

Q1) What is the tens digit of 467?

Q2) What is the hundreds digit of 917?

Q3) What is the hundreds digit of 328?

Q4) What does the 6 digit in 613 represent?

Q5) What does the 3 digit in 432 represent?

Q6) What is the tens digit of 481?

Silver

Q1) What is the hundreds digit of 5417?

Q2) What is the thousands digit of 4652?

Q3) What is the hundreds digit of 6875?

Q4) What does the 9 digit in 9214 represent?

Q5) What is the tens digit of 4856?

Q6) What does the 7 digit in 8725 represent?

Gold

Q1) What is the tens digit of 2500 – 1650?

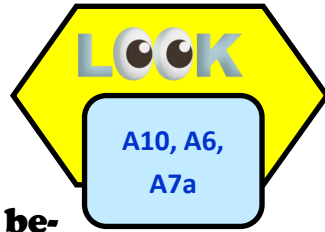
Q2) What is the hundreds digit of 437 – 111?

Q3) What is the thousands digit of 2381 – 1111?

Q4) What is the thousands digit of 3457 + 3108?

Q5) What is the tens digit of 1786 + 1568?

Q6) What is the tens digit of 4446 – 3978?



Problem solving!

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

As we move a place to the left on the place value chart, the value gets ten times bigger.

3 tens = 3 ones x 10 = 30 ones.

3 hundreds = 3 tens x 10 = 30 tens (or 300 ones)

3 thousands = 3 hundreds x 10 = 30 hundreds (or 300 tens)

Th	H	T	O
			3
		3	0
	3	0	0
3	0	0	0

Work out these missing conversion facts

1)	5 hundreds = _____ ones	2)	60 ones = _____ tens
3)	7 thousands = _____ hundreds	4)	30 tens = _____ hundreds
5)	60 ones = _____ tens	6)	3 thousands = _____ hundreds
7)	50 hundreds = _____ thousands	8)	1 thousand = _____ ones
9)	8 hundreds = _____ ones	10)	40 ones = _____ tens
11)	4 thousands = _____ tens	12)	80 hundreds = _____ thousands
13)	30 tens = _____ ones	14)	_____ hundreds = 400 ones
15)	70 tens = _____ hundreds	16)	5 hundreds = _____ tens
17)	60 tens = _____ hundreds	18)	4000 ones = _____ thousands
19)	50 tens = _____ ones	20)	4000 ones = _____ hundreds
21)	_____ thousands = 200 tens	22)	_____ hundreds = 9 thousands

PUZZLE TIME – find the answer to the riddle below in the table!

- I am worth more than 30 hundreds.
- I am less than 7000 ones.
- My tens digit is greater than my ones.
- I am a multiple of 5.
- Who am I?

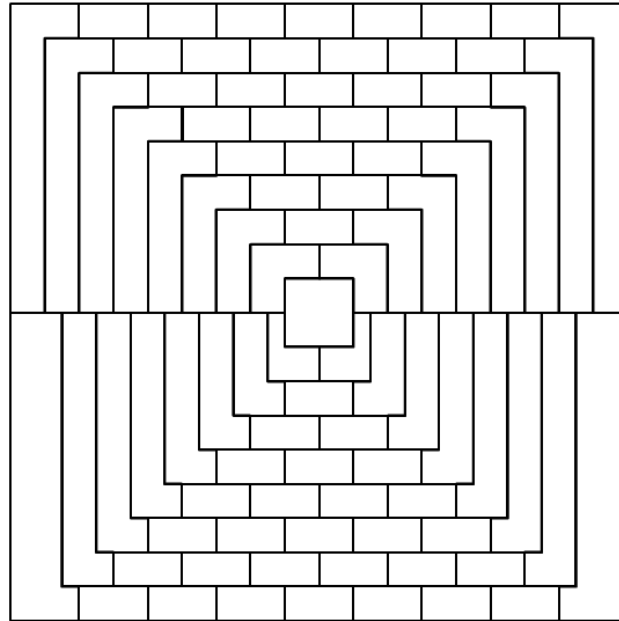
3726	5290	6423
7185	4428	5925



HOMWORK 3: FOUR COLOUR THEOREM

Part A

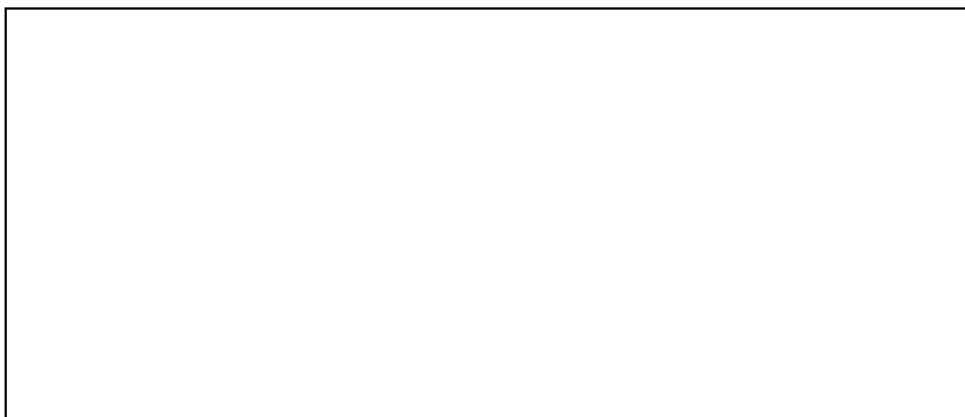
Colour in the pattern so that no areas which touch have the same colour. Try to use the least number of different colours possible.



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

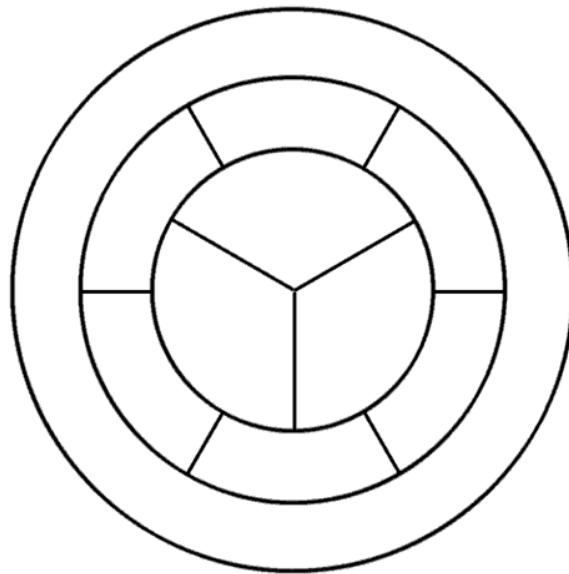
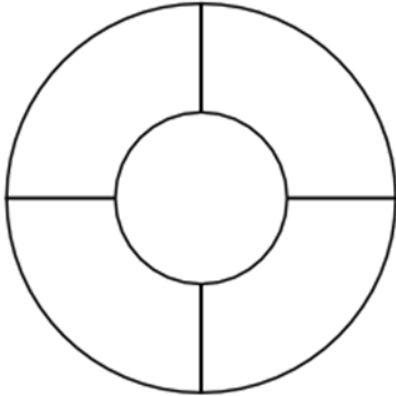
Part B

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

Literacy challenge – Missing vowels!

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

_ Q _ _ LS

TR _ _ NGL _

_ Q _ _ V _ L _ NT

Quick maths!

★★		★★★	
B1	3480 - 1864	C1	63.03 - 0.9789
B2	5105 - 1990	C2	4.31 × 1.2
B3	960 ÷ 15	C3	0.6148 + 972.2
B4	1050 + 3770	C4	84.04 - 0.5953
B5	8731 - 7375	C5	0.3936 - 0.1699
B6	1106 ÷ 14	C6	577.2 + 0.7505
B7	347 × 25	C7	156.2 + 77.7
B8	3133 + 5739	C8	0.0876 ÷ 0.12
B9	8574 - 4025	C9	17.1 × 2.86
B10	5282 - 3863	C10	30 × 368

Recall and Recap

MENTAL STRATEGIES - do these in your head

TIMESTABLES - do these in your head

KEY SKILLS - you may use written calculations for these questions

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		

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		

Q	Question	Answer
1	What is $\frac{4}{6}$ of 30?	
2	3×911	
3	$16071 - 8966$	
4	6.9×5.85	
5	$\frac{8}{10}$ as a decimal number	
6	$23.8 + 0.55$	
7	$(-18) \div 9$	
8	If $a = 6$, $b = 8$ and $c = 4$, what is the value of $(2b/c)^2$?	
9	$(-1) - (-3)$	
10	Is 1 a factor of 3?	
Total out of 10		



Problem solving!

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



Multiplication grids

Write the missing numbers in these multiplication grids.

المشكلة

	×	8	
9		72	
-6			30

المشكلة

	×	0.2	
3			1.2
			6



HOMEWORK 5: AVERAGES

Recall and Recap: Frequency diagrams

I = 1 item
= 5 items

Red Blue Red Green Blue
 Blue Red Blue Red Yellow
 Red Red Yellow Green Red
 Green Blue Green Blue Red

Cross the items out as you tally them so you don't lose track

Complete the table from the data above.

Colour	Tally	Frequency
Red		
Blue		
Green		
Yellow		

Which fruit is the mode?

Remember a Key!

Pictograms

Key = 2 people = 1 person

Blue

Grey

Brown

Green ?

Other

How many people have grey eyes?

How many people have brown eyes?

5 people have green eyes, mark this on the diagram.



Applying your skills

Bronze

Find the mean, mode, median and range:

Q1) 15, 7, 15, 10, 3

Q2) 18, 4, 11, 18, 14

Q3) 15, 21, 11, 15, 5

Q4) 20, 3, 6, 15, 20

Q5) 18, 15, 21, 4, 21

Silver

Find the mean, mode, median and range (round to 1dp):

Q1) 9, 3, 20, 14, 14, 10

Q2) 6, 7, 19, 13, 20, 7

Q3) 4, 8, 15, 6, 12, 12

Q4) 15, 13, 16, 8, 14, 15

Q5) 21, 5, 6, 14, 6, 11

Problem solving!

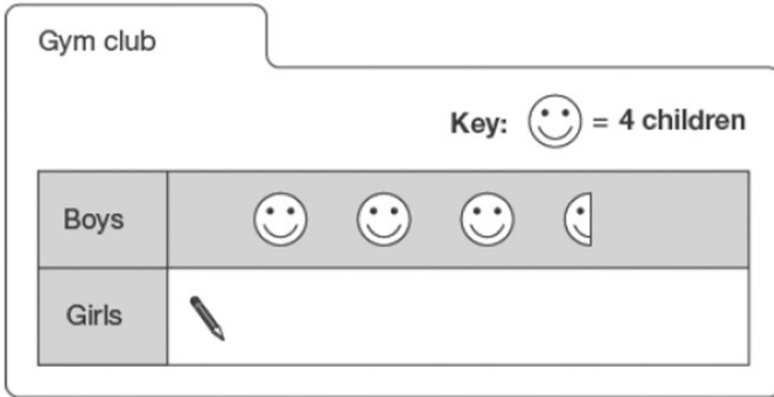
Apply your core skills to the challenge questions below...

Clubs

A sports centre has two different clubs.

- (a) **22 children** go to the gym club.

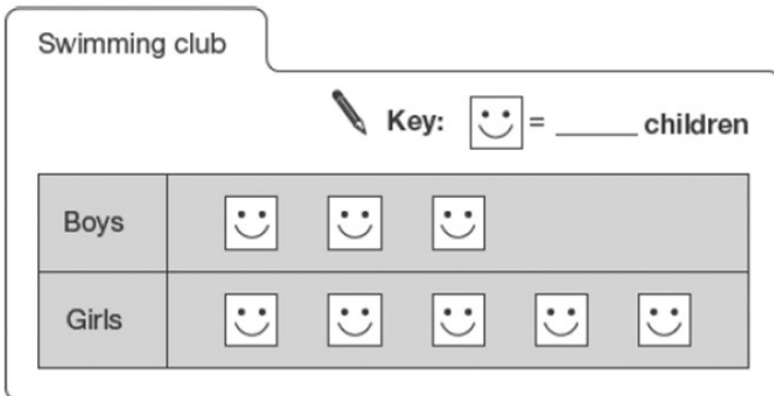
Complete the pictogram.



1 mark

- (b) **10 more girls** than boys go to the swimming club.

Complete the key.



1 mark

Mean

The mean of five numbers is **10**

I add one more number and the mean is now **11**

What number did I add?

.....

2 marks





HOMWORK 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.



HOMWORK 7: NUMERACY

Literacy challenge – Missing vowels!

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

M _ D _ _ N

_ ST _ M _ T _

S _ BST _ T _ T _ _ N

★★		★★★	
B1	$4232 - 1265$	C1	$1.862 \div 0.19$
B2	$5416 - 4292$	C2	$18.93 - 0.2231$
B3	$272 \div 16$	C3	$12.16 \div 1.6$
B4	645×64	C4	9.38×73.4
B5	55×182	C5	20.6×7.15
B6	$1218 \div 14$	C6	$0.12 \div 0.15$
B7	$7229 + 4496$	C7	74×70.1
B8	$8454 - 4569$	C8	$409.4 - 24.52$
B9	$1088 \div 17$	C9	$0.812 - 0.1137$
B10	$608 \div 16$	C10	$328.5 - 265.1$

Recall and Recap

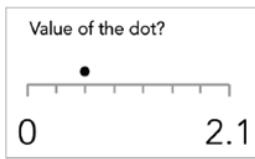
MENTAL STRATEGIES -
do these in your head

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		

KEY SKILLS – you may use written calculations for these questions

Q	Question	Answer
1	What is 125% of £150?	
2	$1710 \div 5$	
3	$85 - 15 \div 5$	
4	$28.82 \div 0.5$	
5	71.204×100	
6	$25 - 1.33$	
7	Simplify $6/60$	
8	Which is the lowest number, -4 or -3?	
9	Value of the dot? 	
10	List the first 4 multiples of 11	
Total out of 10		





Problem solving!

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



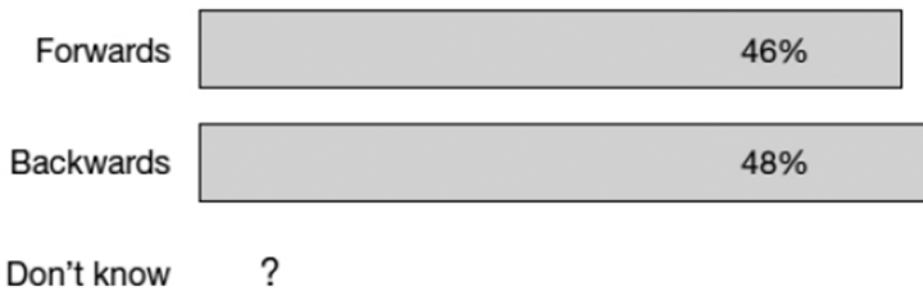
Time machine

Here is a question from a survey.

In a time machine, would you like to go forwards or backwards in time?

People said 'Forwards', 'Backwards' or 'Don't know'.

Results:



The bar for 'Don't know' has not been drawn.

What percentage of people said 'Don't know'?

..... %

2 marks



HOMWORK 8: SEQUENCES

Recall and Recap:

Bronze

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

Q1) 46, 39, 32, , ,

Q2) 44, 36, 28, , ,

Q3) 4, 10, 16, , ,

Q4) 6, 11, 16, , ,

Q5) 3, 9, 15, , ,

Q6) 42, 38, 34, , ,

Silver

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

Q1) 43, , 35, 31,

Q2) 3, , 13.4, , 23.8

Q3) 6, 14.2, , 30.6,

Q4) 39, 33.5, , 22.5,

Q5) 5, 9, , 17,

Q6) 7, , 15.4, , 23.8

Think hard...



- (a) Is 205 a term in the sequence 1, 5, 9, 13, ?
- (b) Is 200 a term in the sequence 4, 10, 16, 22, ?
- (c) Is 1000 a term in the sequence 50, 65, 80, 95, ?
- (d) Is 999 a term in the sequence 11, 20, 29, 38, ?
- (e) Is 458 a term in the sequence 5, 12, 19, 26, ?



Problem solving!

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

The numbers in this sequence increase by 9 each time.

1 10 19 28 37 ...

The sequence continues in the same way.

Will 900 be in the sequence? Explain why

Yes / No

.....
.....

The numbers in this sequence increase by 4 each time.

4 8 12 16 ...

The numbers in this sequence increase by 7 each time.

7 14 21 28 ...

Both sequences continue

Write a number **greater than 100** which will be in **both** sequences



HOMEWORK 9: REAL LIFE MATHS

The following temperatures were taken in January.



Country/State	Temperature (°C)
Amsterdam	4
Cape Town	20
Hong Kong	15
Minneapolis	-21
Moscow	-17
New York	-6
Toronto	-16



1) Put the temperatures in order, from coldest to warmest.

_____ coldest _____ warmest _____

2) How much colder is Amsterdam than Cape Town? _____

3) How much warmer is New York than Moscow? _____

4) Vancouver is 13 degrees warmer than New York. What is the temperature in Vancouver? _____

5) How much colder is Toronto than Amsterdam? _____

6) What is the difference in temperature between the warmest and coldest place?

7) The temperature in Detroit is 32 degrees colder than Cape Town. What is the temperature in Detroit? _____

8) Which two places have the closest temperatures? _____

9) Which place has the median temperature? _____



Captain Salamander has just returned from a round the world trip with his friend Tyger. Here are the places they visited.

From	To	Distance (km)	Distance to nearest 100 km
Washington DC	Los Angeles	3693	3700
Los Angeles	Tokyo	8807	
Tokyo	Bombay	6741	
Bombay	Athens	5173	
Athens	Paris	2096	
Paris	London	343	
London	Washington DC	5899	

1) Fill in the distance to the nearest 100 km column.

2) Put the distances in order from shortest to longest.

_____ shortest _____ longest

3) How much further is the trip from Bombay to Athens than the trip from Washington DC to Los Angeles? _____ km

4) What is the total distance from Los Angeles to Tokyo to Bombay to Athens? _____ km

5) Tyger says 'The distance from Washington DC to Los Angeles is more than 10 times the distance from Paris to London.' Is he right? _____

6) When arriving at Bombay, Tyger says 'So far we have travelled over 20,000 km.' Is he right?



HOMWORK 10: NUMERACY

Literacy challenge – Missing vowels!

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

F _ CT _ RS

M _ LT _ PL _ S

Q _ _ DR _ L _ T _ R _ L

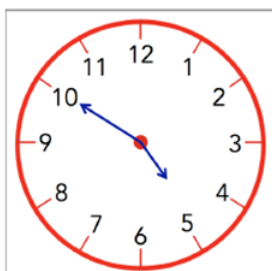
Recall and Recap

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		



KEY SKILLS – you may use written calculations for these questions

★★		★★★	
B1	85×740	C1	$0.4427 + 16.14$
B2	$8007 - 5127$	C2	$0.702 \div 1.3$
B3	$3305 - 3152$	C3	$98.47 + 0.8351$
B4	$2527 + 4242$	C4	4.79×40.9
B5	23×941	C5	$0.9609 - 0.2424$
B6	$6113 + 9417$	C6	$9.117 + 0.2734$
B7	$9659 + 2820$	C7	86.6×2.8
B8	116×54	C8	75.9×52
B9	18×746	C9	34.5×1.24
B10	$3856 - 2529$	C10	$39.77 + 0.7975$

Q	Question	Answer
1	What is the value of 11^2 ?	
2	$7905 + 626$	
3	$(10 - 9) \times 1$	
4	Write 744620 in words. (Use the opposite page for your answer)	
5	$0.67 \div 100$	
6	$3 \times (-1)$	
7	Round 1.982 to 2 d.p.	
8	$(-3) + (-6)$	
9	Round 0.2352 to 3 s.f.	
10	Letter at (0, 1)	
Total out of 10		

$$5 + 4 = \text{Octagon} \quad 7 - 4 = \text{Star}$$

Now use what you've learned to find the answers to these:

(1) $\text{Star} + \text{Star} + \text{Star} =$

(2) $\text{Star} + \text{Octagon} + \text{Star} =$

(3) $\text{Octagon} + \text{Star} + \text{Octagon} =$

(4) $\text{Star} + 5 + \text{Octagon} =$

(5) $\text{Octagon} + \text{Octagon} - \text{Octagon} =$

(6) $\text{Octagon} + \text{Star} - 3 =$

(7) $4 \times \text{Star} \times \text{Octagon} =$

(8) $\text{Octagon} + \text{Star} - \text{Octagon} =$

(9) $4 \times \text{Star} \div \text{Star} =$

(10) $7 \times \text{Octagon} \div \text{Octagon} =$

(11) $\text{Star} + \text{Octagon} \times \text{Star} =$

(12) $\text{Octagon} + \text{Star} \times \text{Octagon} =$

(13) $\text{Octagon} \times \text{Star} - \text{Octagon} =$

(14) $\text{Octagon} + 24 \div \text{Star} =$

(15) $\text{Octagon} \times \text{Star} - \text{Star} =$

(16) $2 \times \text{Octagon} - \text{Star} =$

(17) $\text{Star} + 54 \div \text{Octagon} =$

(18) $\text{Star} + \text{Star} \times \text{Octagon} =$

(19) $\text{Star} + \text{Star} + \text{Octagon} \times \text{Octagon} =$

(20) $\text{Octagon} \times \text{Octagon} + \text{Star} \times \text{Star} =$



HOMWORK 11: SUBSTITUTION

Recall and Recap:

Bronze

Q1) If $q = 10$ find:
 $8q - 5$

Q2) If $d = 9$ find:
 $3d + 3$

Q3) If $s = 3$ find:
 $8s + 11$

Q4) If $b = 7$ find:
 $4b + 9$

Q5) If $i = 7$ find:
 $3i + 9$

Q6) If $x = 7$ find:
 $12x + 4$

Silver

Q1) If $r = 10$ and $k = 7$ find:
 $2r + 5k + 3$

Q2) If $q = 12$ and $f = 3$ find:
 $4q + 12f - 8$

Q3) If $d = 9$ and $x = 5$ find:
 $10d + 4x - 6$

Q4) If $q = 3$ and $w = 8$ find:
 $8q + 2w - 11$

Q5) If $w = 10$ and $q = 3$ find:
 $5w + 11q - 5$

Q6) If $i = 3$ and $c = 4$ find:
 $12i + 7c - 5$

LOOK

G20

Question 2: If $f = 5$ $g = 6$ $h = 4$ and $i = 2$
Find the value of each expression.

(a) fg

(b) hi

(c) fgh

(d) i^3

(e) \sqrt{h}

(f) $3f + 2g$

(g) $5h + 7i$

(h) $9h - 7i$



Problem solving!

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



Mrs Jones is preparing the food for a party.

She uses this rule to work out how many sausage rolls to prepare

3 sausage rolls per guest plus an extra 20

How many sausage rolls should she prepare if there are 42 guests?

For the last party, Mrs Jones made 86 sausage rolls

How many guests were there at the last party?



HOMWORK 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.

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

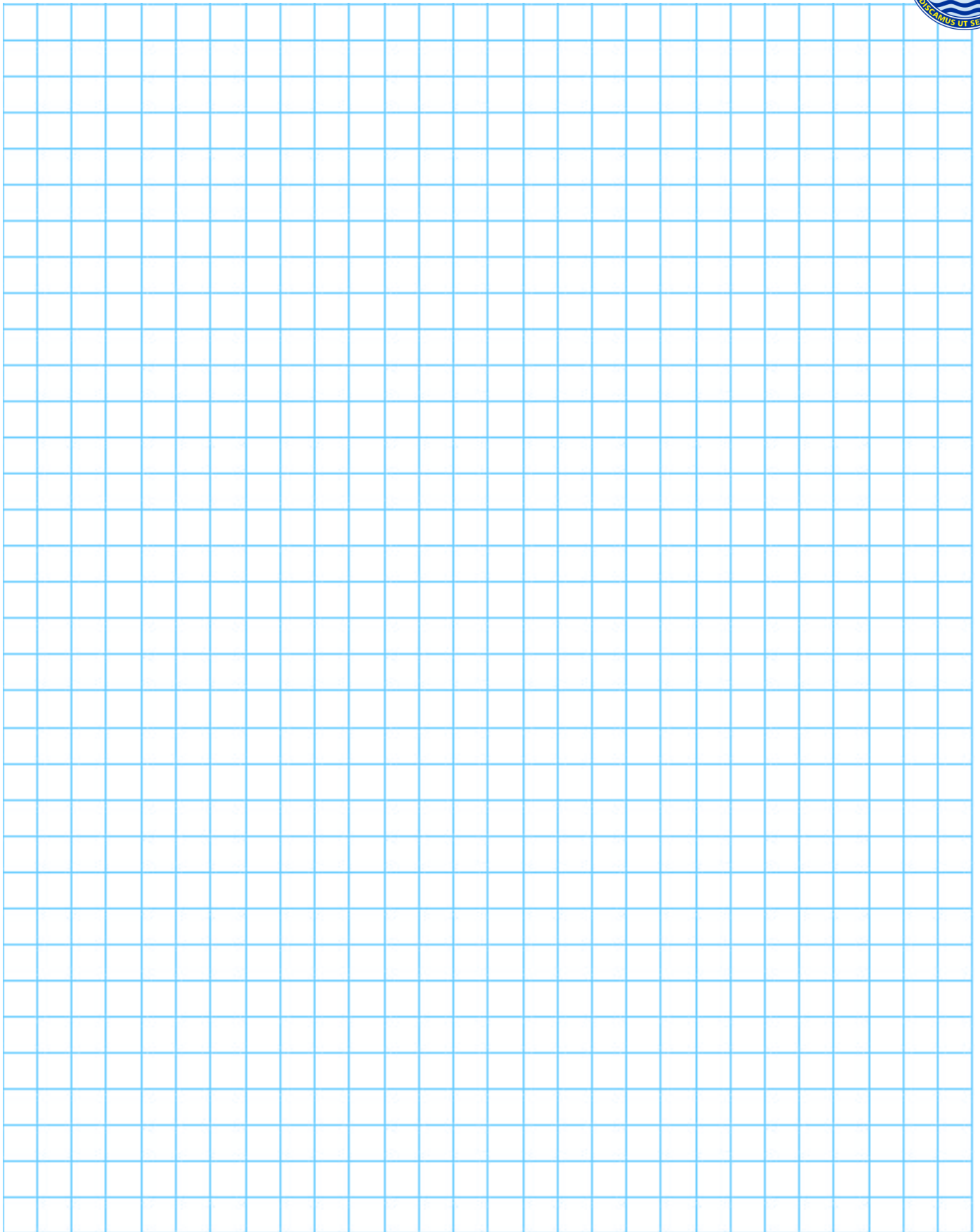
If you have any issues logging in, you must speak to your class teacher as soon as possible.

Username— firstnamelastname@benjamin

Password— your DOB (format: monthDYYYYY)

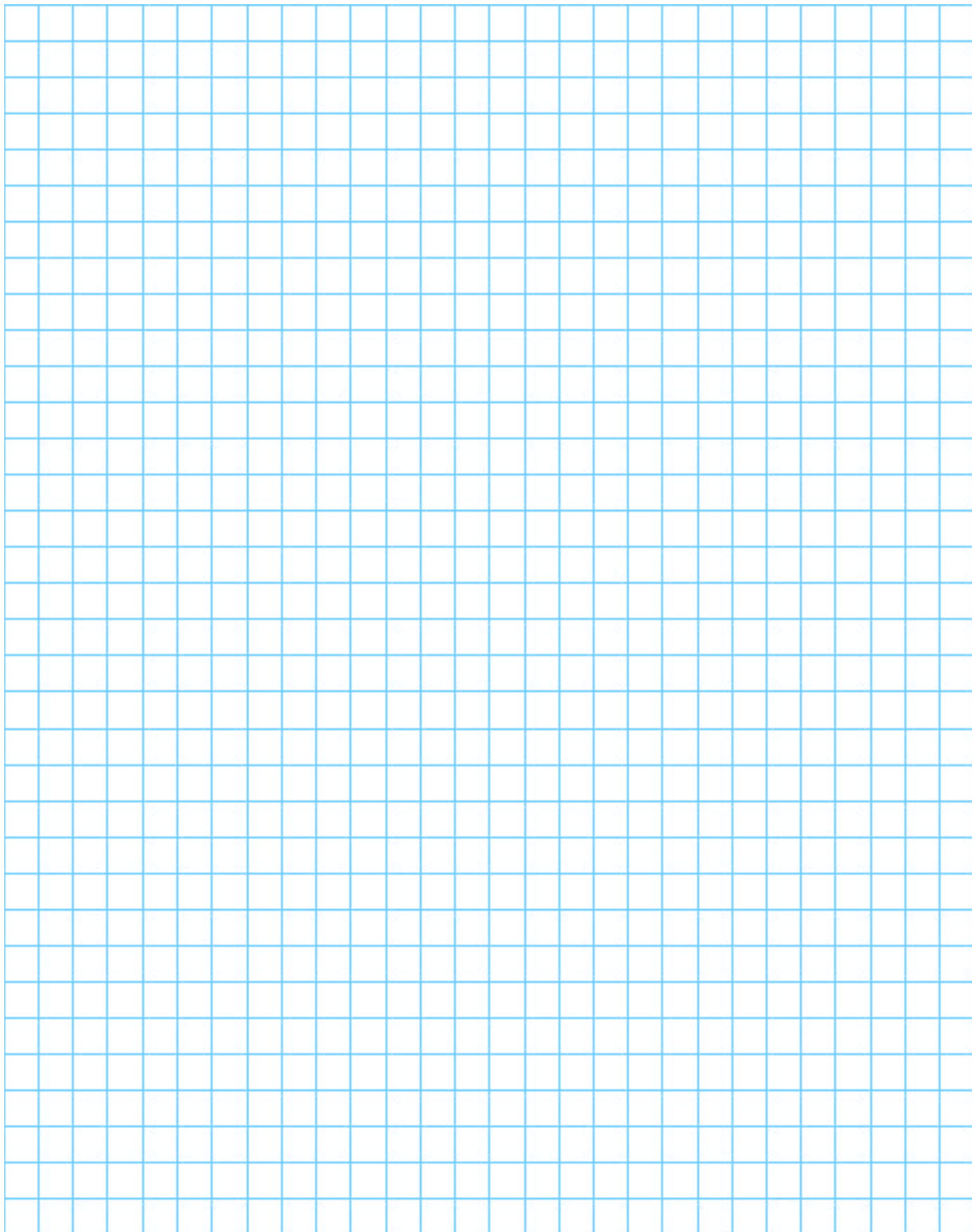
If you need a printed copy of this homework task, make sure you speak to your class teacher before the due date and they will print a copy for you to complete.

Additional working out space:

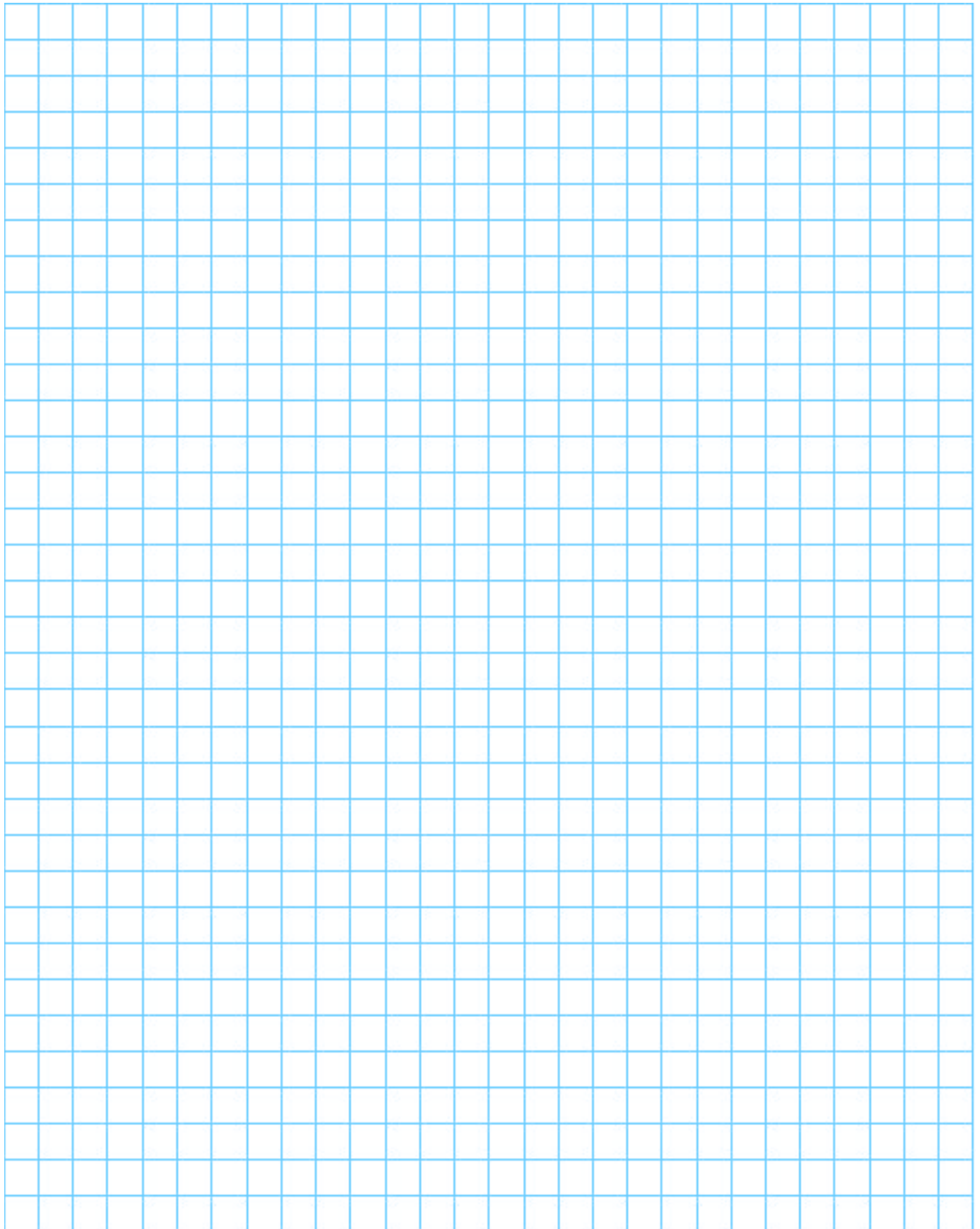




Additional working out space:



Additional working out space:



ANSWERS—WEEK 1

A1	B1	16560	C1	513.646
A2	B2	76	C2	9.5
A3	B3	5028	C3	759.766
A4	B4	6931	C4	393.0672
A5	B5	13533	C5	898.314
A6	B6	77	C6	5.4
A7	B7	418	C7	0.7
A8	B8	75081	C8	73.438
A9	B9	12024	C9	1.3326
A10	B10	35025	C10	556.9

Q	Question	Answer
1	$481 + 1429$	1910
2	$(9 - 5)^2 + 3 \times 4$	28
3	Write One Thousand and Thirty Two in digits	1032
4	$0.35 + 100$	0.0035
5	$(-6) \times (-10)$	60
6	Round 81.4358 to 2 d.p.	81.44
7	$(-5) + (-5)$	-10
8	Round 21 to 2 s.f.	21
9	Letter at (0, -1)	S
10	$1/4 = 3/\square$	12
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

[2]

(11) 1

1

11

9

ANSWERS—WEEK 2

Q1) 5	_____
Q2) 3	_____
Q3) 1	_____
Q4) 6	_____
Q5) 5	_____
Q6) 6	_____
Gold	

Q1) 4	_____
Q2) 4	_____
Q3) 8	_____
Q4) nine thousand	_____
Q5) 5	_____
Q6) seven hundred	_____
Silver	

Q1) 6	_____
Q2) 9	_____
Q3) 3	_____
Q4) six hundred	_____
Q5) thirty	_____
Q6) 8	_____
Bronze	

Write down these numbers in standard form.

- | | | |
|----|---|---------------|
| 1) | 8 thousands + 7 hundreds + 4 tens + 5 ones = | <u>8,745</u> |
| 2) | 5 thousands + 2 hundreds + 9 tens + 3 ones = | <u>5,293</u> |
| 3) | 4 ten thousands + 7 thousands + 3 hundreds = | <u>47,300</u> |
| 4) | 2 ten thousands + 8 hundreds + 5 tens + 9 ones = | <u>20,859</u> |
| 5) | 7 ten thousands + 2 thousands + 8 tens + 2 ones = | <u>72,082</u> |

Work out these missing conversion facts

1)	5 hundreds = $\overline{500}$ ones	2)	60 ones = $\overline{6}$ tens
3)	7 thousands = $\overline{70}$ hundreds	4)	30 tens = $\overline{3}$ hundreds
5)	60 ones = $\overline{6}$ tens	6)	3 thousands = $\overline{30}$ hundreds
7)	50 hundreds = $\overline{5}$ thousands	8)	1 thousand = $\overline{1000}$ ones
9)	8 hundreds = $\overline{800}$ ones	10)	40 ones = $\overline{4}$ tens
11)	4 thousands = $\overline{400}$ tens	12)	80 hundreds = $\overline{8}$ thousands
13)	30 tens = $\overline{300}$ ones	14)	$\overline{4}$ hundreds = 400 ones
15)	70 tens = $\overline{7}$ hundreds	16)	5 hundreds = $\overline{50}$ tens
17)	60 tens = $\overline{6}$ hundreds	18)	4000 ones = $\overline{4}$ thousands
19)	50 tens = $\overline{500}$ ones	20)	4000 ones = $\overline{40}$ hundreds
21)	$\overline{2}$ thousands = 200 tens	22)	$\overline{90}$ hundreds = 9 thousands

PUZZLE TIME – find the answer to the riddle below in the table!

- I am worth more than 30 hundreds.
- I am less than 7000 ones.
- My tens digit is greater than my ones.
- I am a multiple of 5.
- Who am I?

3726	$\overline{5290}$	7185	4428
6423	5925	7185	5925

ANSWERS—WEEK 4

A1	B1	1616	62.0511
A2	B2	3115	5.172
A3	B3	64	972.8148
A4	B4	4820	83.4447
A5	B5	1356	0.2237
A6	B6	79	577.9505
A7	B7	8675	233.9
A8	B8	8872	0.73
A9	B9	4549	48.906
A10	B10	1419	11040



Q	Question	Answer
1	What is $\frac{4}{6}$ of 30?	20
2	3×911	2733
3	$16071 - 8966$	7105
4	6.9×5.85	40.365
5	8/10 as a decimal number	0.8
6	$23.8 + 0.55$	24.35
7	$(-18) \div 9$	-2
8	If $a = 6$, $b = 8$ and $c = 4$, what is the value of $(2b/c)^2$	16
9	$(-1) - (-3)$	2
10	Is 1 a factor of 3?	Yes

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

3. Completes both multiplication grids correctly, ie

	-6	9	8
	-48	72	-45
	30		-5

	15	3	0.4
	3	0.6	0.2
		1.2	

or Completes one of the grids correctly and makes not more than one error or omission in the other grid

2

or Completes one of the grids correctly

or

Makes not more than one error or omission in each grid

1

i For 2m or 1m, follow through

For the first grid, accept follow through only

from their -5 but note that their -5 must be negative

eg

	-6	9	8
	-48	72	(error but negative)
	30	-54	follow through

For the second grid, accept follow through only from their 15

	10	3	0.4
	(error)	0.6	0.2
	6	1.2	

follow through

[3]

ANSWERS—WEEK 5

Silver
Q1) Mean = 11.7, Mode = 14, Median = 12, Range = 17
Q2) Mean = 12, Mode = 7, Median = 10, Range = 14
Q3) Mean = 9.5, Mode = 12, Median = 10, Range = 11
Q4) Mean = 13.5, Mode = 15, Median = 14.5, Range = 8
Q5) Mean = 10.5, Mode = 6, Median = 8.5, Range = 16

Bronze
Q1) Mean = 10, Mode = 15, Median = 10, Range = 12
Q2) Mean = 13, Mode = 18, Median = 14, Range = 14
Q3) Mean = 13.4, Mode = 15, Median = 15, Range = 16
Q4) Mean = 12.8, Mode = 20, Median = 15, Range = 17
Q5) Mean = 15.8, Mode = 21, Median = 18, Range = 17

Pictograms

Remember a Key!

Key: \bigcirc = 2 people, \bigcirc = 1 person

Blue: 1 person

Grey: 8 people

Brown: 10 people

Green: 5 people

Other: 2 people

How many people have grey eyes? **12**

How many people have brown eyes? **9**

5 people have green eyes, mark this on the diagram.

Complete the table from the data above.

Cross the items out as you tally them so you don't lose track

Red	Blue	Red	Blue	Green	Blue	Green	Blue	Red
Blue	Red	Red	Blue	Red	Yellow	Green	Red	Red
Red	Blue	Red	Blue	Red	Yellow	Green	Blue	Red

Which fruit is the mode? **Red**

Colour	Tally	Frequency
Red		8
Blue		6
Green		4
Yellow		2

|| = 1 item
|||| = 5 items

(b) 5

16

3.

or Shows the value 66

or

Shows or implies a complete correct method with not more than one computational error

eg

• $6 \times 11 - 5 \times 10$

• $5 \times 10 = 50, 6 \times 11 = 66$ (error) so 15

i

For 1m, method uses arbitrary values with a mean of 10 for the

original five numbers

Condone

eg, for 1m accept

• $8 + 9 + 10 + 11 + 12 = 49$ (error)

$6 \times 11 - 49 = 17$

Do not accept for 1m, error is in the number of values in the

set after one is added

eg

• $5 \times 11 = 55, 55 - 50 = 5$

1

(a)

Indicates two symbols for Girls

i

Features of faces omitted or circles inaccurate in size

Accept provided the pupil's intention is clear

i

Response includes half symbols

eg



Condone if unambiguous

1

(b) 5

16

3.

or Shows the value 66

or

Shows or implies a complete correct method with not more than one computational error

eg

• $6 \times 11 - 5 \times 10$

• $5 \times 10 = 50, 6 \times 11 = 66$ (error) so 15

i

For 1m, method uses arbitrary values with a mean of 10 for the

original five numbers

Condone

eg, for 1m accept

• $8 + 9 + 10 + 11 + 12 = 49$ (error)

$6 \times 11 - 49 = 17$

Do not accept for 1m, error is in the number of values in the

set after one is added

eg

• $5 \times 11 = 55, 55 - 50 = 5$

1

ANSWERS—WEEK 7

Q	Question	Answer
1	What is 125% of £150?	£187.50
2	$1710 \div 5$	342
3	$85 - 15 \div 5$	82
4	$28.82 \div 0.5$	57.64
5	71.204×100	7120.4
6	$25 - 1.33$	23.67
7	Simplify $6/60$	$1/10$
8	Which is the lowest number, -4 or -3?	-4
9	See number line	0.6
10	List the first 4 multiples of 11	11, 22, 33, 44

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

B1	**	2967	C1	9.8
B2	**	1124	C2	18.7069
B3	**	17	C3	7.6
B4	**	41280	C4	688.492
B5	**	10010	C5	147.29
B6	**	87	C6	0.8
B7	**	11725	C7	5187.4
B8	**	3885	C8	384.88
B9	**	64	C9	0.6983
B10	**	38	C10	63.4

4.
6

or Shows the value 94 or the values 4 and 2

or

Shows a complete correct method with not more than one computational error

eg

- $100 - 46 - 48$
- $100 - (46 + 48)$
- $100 - 46 = 53$ (error)

$$53 - 48 = 5$$

Do not accept for 1m, necessary brackets omitted

eg

- $100 - 46 + 48$

ANSWERS—WEEK 8

- (a) Yes
- (b) No
- (c) No
- (d) No
- (e) No

Silver
Q1) 39, 27 Rule: Subtract 4
Q2) 8.2, 18.6 Rule: Add 5.2
Q3) 22.4, 38.8 Rule: Add 8.2
Q4) 28, 17 Rule: Subtract 5.5
Q5) 13, 21 Rule: Add 4
Q6) 11.2, 19.6 Rule: Add 4.2

Bronze
Q1) 25, 18, 11 Rule: Subtract 7
Q2) 20, 12, 4 Rule: Subtract 8
Q3) 22, 28, 34 Rule: Add 6
Q4) 21, 26, 31 Rule: Add 5
Q5) 21, 27, 33 Rule: Add 6
Q6) 30, 26, 22 Rule: Subtract 4

28 56 84 112

Write a number greater than 100 which will be in both sequences

Both sequences continue

7 14 21 28 ...

The numbers in this sequence increase by 7 each time.

4 8 12 16 ...

The numbers in this sequence increase by 4 each time.

Each number in the sequence is one more than the multiples of 9. Therefore no multiple of 9 is in the sequence.

Yes No

Will 900 be in the sequence? Explain why

ANSWERS—WEEK 9

Captain Salamander has just returned from a round the world trip with his friend Tyger. Here are the places they visited.

From	To	Distance (km)	Distance to nearest 100 km
Washington DC	Los Angeles	3693	3700
Los Angeles	Tokyo	8807	8800
Tokyo	Bombay	6741	6700
Bombay	Athens	5173	5200
Athens	Paris	2096	2100
Paris	London	343	300
London	Washington DC	5899	5900

1) Fill in the distance to the nearest 100 km column.

2) Put the distances in order from shortest to longest.

shortest	longest
343	8807
2096	6741
3693	5899
5173	

3) How much further is the trip from Bombay to Athens than the trip from Washington DC to Los Angeles? 1480 km

4) What is the total distance from Los Angeles to Tokyo to Bombay to Athens? 15548 km

5) Tyger says 'The distance from Washington DC to Los Angeles is more than 10 times the distance from Paris to London.' Is he right? no
 $343 \times 10 = 3430$

6) When arriving at Bombay, Tyger says 'So far we have travelled over 20,000 km.' Is he right?

$$3693 + 8807 + 6741 = 19241 \quad \text{no}$$



The following temperatures were taken in January.



Country/State	Temperature (°C)
Amsterdam	4
Cape Town	20
Hong Kong	15
Minneapolis	-21
Moscow	-17
New York	-6
Toronto	-16

1) Put the temperatures in order, from coldest to warmest.

coldest
 -21 -17 -16 -6 -4 -15 -20
 warmest

2) How much colder is Amsterdam than Cape Town? **16° colder**

3) How much warmer is New York than Moscow? **11° warmer**

4) Vancouver is 13 degrees warmer than New York. What is the temperature in Vancouver? **7°**

5) How much colder is Toronto than Amsterdam? **20° colder**

6) What is the difference in temperature between the warmest and coldest place? **41°**

7) The temperature in Detroit is 32 degrees colder than Cape Town. What is the temperature in Detroit? **-12°**

8) Which two places have the closest temperatures? **Minneapolis and Moscow**

9) Which place has the median temperature? **New York**

ANSWERS—WEEK 10

Q	Question	Answer
1	What is the value of 11^2 ?	121
2	$7905 + 626$	8531
3	$(10 - 9) \times 1$	1
4	Write 744620 in words. (Use the opposite page for your answer)	Seven Hundred and Forty Four Thousand, Twenty
5	$0.67 + 100$	0.0067
6	$3 \times (-1)$	-3
7	Round 1.982 to 2 d.p.	1.98
8	$(-3) + (-6)$	-9
9	Round 0.2352 to 3 s.f.	0.235
10	Letter at (0, 1)	H

Q	Question	Answer
1	$6 \times 6 = \square$	36
2	$2 + 2 = \square$	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

	B1	B2	B3	B4	B5	B6	B7	B8	B9	C10
B1	62900	16.5827	0.54	99.3051	195.911	0.7185	9.3904	242.48	3946.8	42.78
B2	2880									
B3	153									
B4	6769									
B5	21643									
B6	15530									
B7	12479									
B8	6264									
B9	13428									
C10	1327									40.5675

(1) $9 = 3 + 3 + 3$

(2) $15 = 3 + 9 + 3$

(3) $21 = 9 + 3 + 9$

(4) $17 = 9 + 5 + 3$

(5) $9 = 9 + 9 - 9$

(6) $9 = 3 - 3 + 9$

(7) $108 = 4 \times 3 \times 9$

(8) $3 = 9 + 3 - 9$

(9) $4 = 3 \div 3 \times 4$

(10) $7 = 9 \div 9 \times 7$

(11) $30 = 3 \times 9 + 3$

(12) $30 = 9 \times 3 + 9$

(13) $18 = 9 - 3 \times 9$

(14) $17 = 3 \div 24 + 9$

(15) $24 = 3 - 3 \times 9$

(16) $15 = 3 - 9 \times 2$

(17) $9 = 9 \div 54 + 3$

(18) $36 = 9 \times 3 + 3$

(19) $87 = 9 \times 9 + 3 + 3$

(20) $90 = 3 \times 3 + 9 \times 9$

Now use what you've learned to find the answers to these:

$$5 + 4 = 9 \quad 7 - 4 = 3$$

ANSWERS—WEEK 11

- (a) 30
- (b) 8
- (c) 120
- (d) 8
- (e) 2
- (f) 27
- (g) 34
- (h) 22

Question 2:

Q1) 58	_____
Q2) 76	_____
Q3) 104	_____
Q4) 29	_____
Q5) 78	_____
Q6) 59	_____
Silver	

Q1) 75	_____
Q2) 30	_____
Q3) 35	_____
Q4) 37	_____
Q5) 30	_____
Q6) 88	_____
Bronze	

22

$$66 \div 3 = 22$$

$$86 = 20 - 98$$

How many guests were there at the last party?

For the last party, Mrs Jones made 86 sausage rolls

146

$$126 + 20 = 146$$

$$42 \times 3 = 126$$

How many sausage rolls should she prepare if there are 42 guests?

3 sausage rolls per guest plus an extra 20

She uses this rule to work out how many sausage rolls to prepare

Mrs Jones is preparing the food for a party.

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

