WGHS

NAME ……

SCHOOL ……..

SAMPLE

MATHEMATICS

Time allowed: 1 hour

Instructions to candidates:

- Write your name and school in the spaces above
- Answer the questions in the spaces provided in this booklet
- Show all the stages of any calculations
- Do not spend too long on any one question
- If you cannot answer a question, leave it and attempt the next one
- Return at the end to those you have left out
- Supplementary answer paper may be used, but must be handed in
- Calculators may **NOT** be used

TOTAL: 60 Marks

		Total	Overall %

Q1. Work out the following.

a) 2516 + 185

.....

1 mark

b) 475 – 83

.....

1 mark

c) 45 × 9

.....

1 mark

d) 161 ÷ 7

.....

1 mark

e) Multiply 372 by 24

.....

2 marks

f) Divide 4125 by 12

.....

2 marks

Q2.

(a) Add together **5.8** and **6.3**

.....

1 mark

(b) Subtract **3.7** from **11.2**

.....

1 mark

(c) Multiply **35.2** by **8**

.....

1 mark

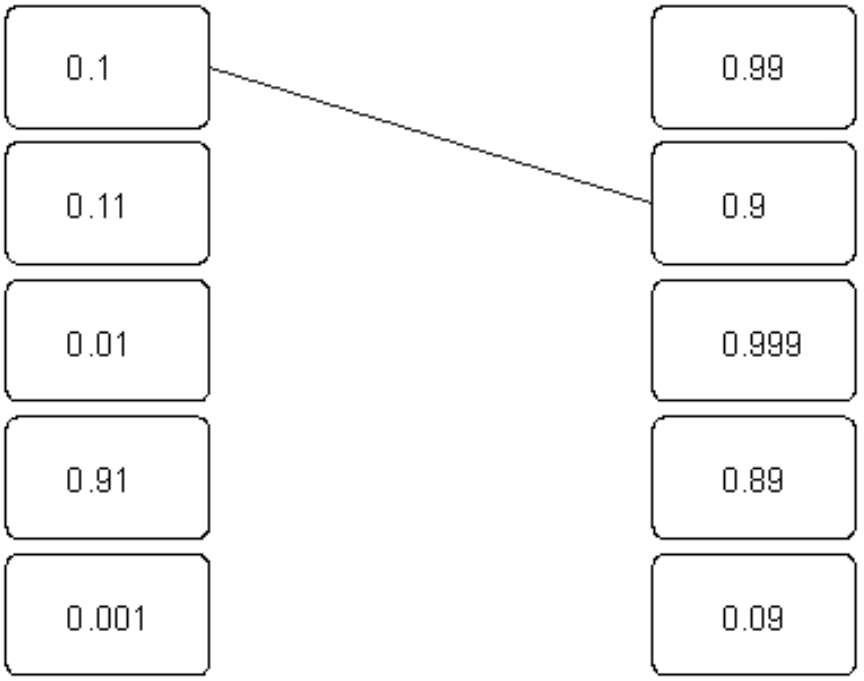
(d) Divide **3.51** by **9**

.....

2 marks

Q3. Join all the pairs of numbers that **add** together to equal **1**

The first one is done for you.



2 marks

Q4. (a) A **three-digit** number is a **multiple of 6**

What could the number be?

Give an example.

.....

Now give a **different** example.

.....

2 marks

(b) A **two-digit** number is a **factor of 100**

What could the number be?

Give an example.

.....

Now give a **different** example.

.....

2 marks

Q5. Work out the following.

(a) 4 + -5

.....

1 mark

(b) -12 + 7

.....

1 mark

(c) -7 - (-8)

.....

1 mark

(d) -441 ÷ 7

.....

1 mark

Q6.

Work out

a) $\frac{2}{8}+\frac{3}{8}$ =

.....

1 Mark

b) $\frac{10}{17}-\frac{7}{17}$ =

.....

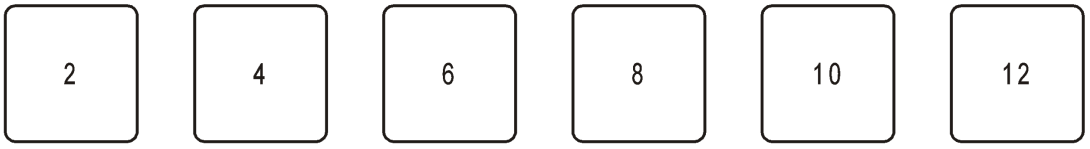
1 Mark

c) $\frac{1}{4} + \frac{1}{3} =$

……

2 Marks

Q7. Here are six number cards.



(a) Choose two of these six cards to make a fraction that is equivalent to $\frac{1}{3}$

$\frac{\square}{\square}$

1 mark

(b) Choose two of these six cards to make a fraction that is **less than** $\frac{1}{2}$ but **greater than 0**

$\frac{\square}{\square}$

1 mark

Q8.

(a) Write the missing numbers.

50% of 20 = ...

5% of 20 = ...

1% of 20 = ...

2 marks

(b) Work out 58% of 20

You can use part (a) to help you.

.....

1 mark

(c) Using your answer to (b) to help you **increase** 20 by 58%

.....

1 mark

Q9.

(a) Wakefield Girls' High School are planning a trip to London to support their Hockey Team in the National Finals. The school hires **12** coaches. Each coach holds **48** passengers.

How many passengers is that altogether?

Show your working.

..... passengers

2 marks

(b) The club wants to put one first aid kit into each of the 12 coaches.

These first aid kits are sold in **boxes of 5**

How many boxes does the club need?

..... boxes

2 marks

Q10. I buy a widescreen television costing **£1560**

I pay **£900 now**, then
I pay the rest of the money in **3 equal payments**.

How much is each payment?

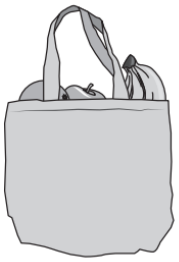
Show your working.

.....

3 marks

Q11.

Paul has a bag of fruit that weighs **3.85 kilograms.**



He takes out a banana. Now the bag of fruit weighs **3.65 kg.**

Next, he takes out an orange. Now the bag weighs **2850 g.**

How much **more** does the orange weigh than the banana?

.....

3 marks

Q12.

(a) A pupil measured the angles in a triangle.

She said:

The angles are 30°, 60° and 100°

Could she be correct? Tick (✓) Yes or No.

☐ Yes ☐ No

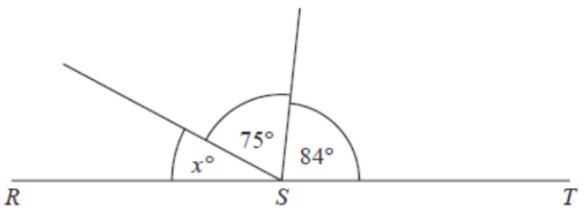
Explain your answer.

1 mark

(b) This diagram is not drawn accurately.

RST is a straight line.

Calculate the size of angle *x*



.....°

2 marks

Q13. You can make green paint by mixing:

200 ml of blue paint

1, 350 ml of yellow paint

Jvan wants to make some of this green paint.

He uses 800 ml of **blue** paint.

How much green paint does he make?

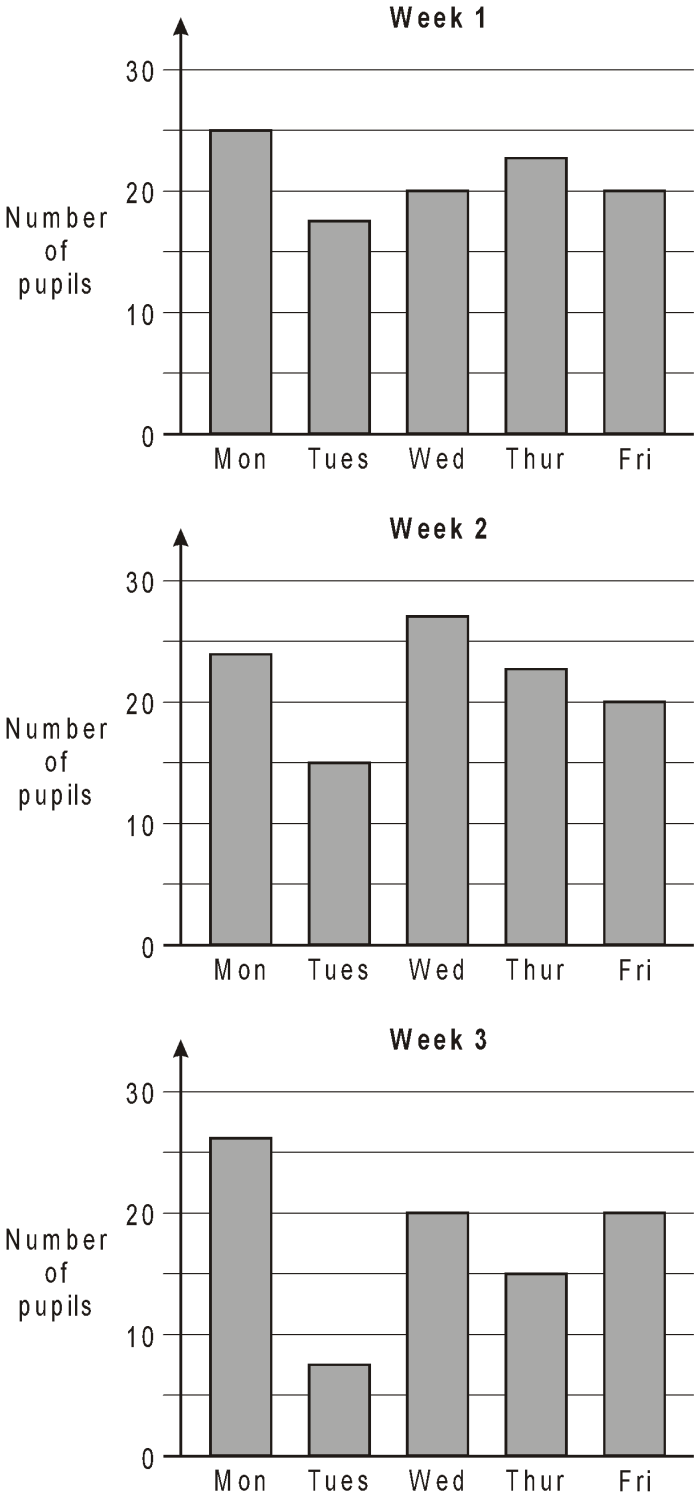
.....

3 marks

Blank page!

Please turn over for next question

Q14. The bar charts show how many pupils went to a maths club.



Is each statement below true or false, or is there not enough information to tell?

Tick (✓) the correct box.

(a) In each of these weeks, the day with the **most pupils** was **Monday**.

☐ True ☐ False ☐ Not enough information

Explain your answer.

1 mark

(b) In each of these weeks, the **same number** of pupils went to the club on **Friday**.

☐ True ☐ False ☐ Not enough information

Explain your answer.

1 mark

(c) In each of these weeks, the **same pupils** went to the club on **Friday**.

☐ True ☐ False ☐ Not enough information

Explain your answer.

1 mark

Q15.

Look at the triangle.

XYW is a straight line.

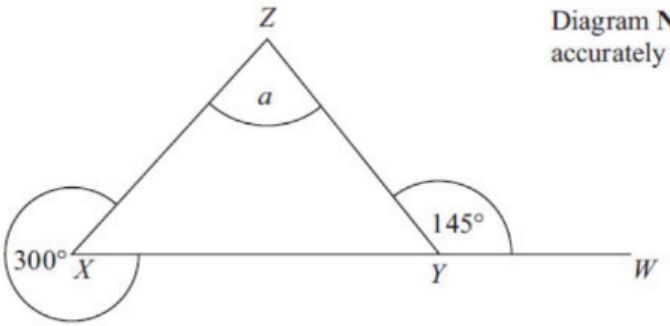


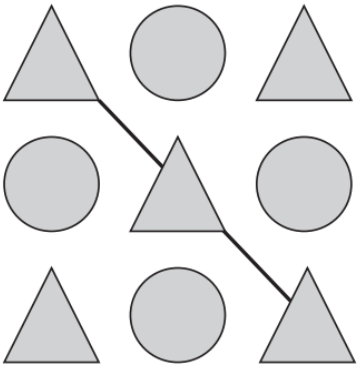
Diagram **NOT** accurately drawn

Work out the size of the angle marked *a.*

.....

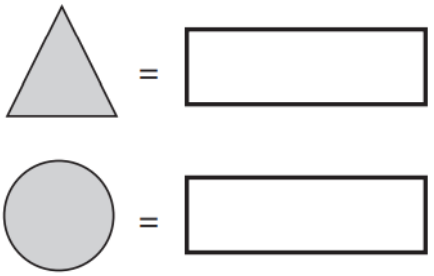
3 marks

Q16.



Each shape stands for a number.
The total of the shapes on the diagonal line is 51.
The total of all the shapes is 161.

Calculate the value of each shape.



3 marks

Q17.

In this question, *n* stands for any **whole number**.

(a) For the expression **2*n***, tick (✓) the correct statement below.

☐ **2*n*** must be odd.

☐ **2*n*** must be even.

☐ **2*n*** could be odd or even.

Explain your answer.

1 mark

(b) For the expression **3*n***, tick (✓) the correct statement below.

☐ **3*n*** must be odd.

☐ **3*n*** must be even.

☐ **3*n*** could be odd or even.

Explain your answer.

1 mark

End of questions

ANSWERS

1. a) 2701
   b) 392
   c) 405
   d) 23
   e) 8928
   f) 343.75

2. a) 12.1
   b) 7.5
   c) 281.6
   d) 0.39

3. 0.11 - 0.89
   0.01 - 0.99
   0.91 - 0.09
   0.001 - 0.999

4. a) students own response
   b) two examples from 10, 20, 25, 50

5. a) -1
   b) -5
   c) 1
   d) -63

6. a) 5/8
   b) 3/17
   c) 7/12

7. a) 2 and 6 OR 4 and 12
   b) 2 and 6 OR 2 and 8 OR 2 and 10 OR 2 and 12 OR 4 and 10 OR 4 and 12

8. a) 10, 1, 0.2
   b) 11.6
   c) 31.6

9. a) 576
   b) 3

10. £220

11. 600 g

12. a) No, angles in a triangle add up to 180
    b) 21

13. 6200 ml

14. a) No, in Week 2 Wednesday had the most pupils.
    b) Yes, 20 went on Friday in each week.
    c) Not enough information, no names are given.

15. 85

16. Triangle = 17
    Circle = 19

17. a) 2n must be even, all multiples of 2 are even.
    b) 3n could be odd or even, if n is even 3n would be even, if n is odd 3n would be odd