Section A	_____
Section B	_____
Total mark	_____

Emanuel School

Entrance Exam B

Mathematics

11+ Entry

Time Allowed: 1 HOUR

Surname	
First Name	
School	

Fill in the boxes above and read the following carefully:

1. Answer all 34 questions in the spaces provided in the order set.
2. If you cannot answer a question, move on to the next one.
3. Show all your working out in this booklet.
4. Cross out all work which you do not want marked.
5. Give all answers that are fractions in their simplest form.
6. The total marks in the paper is 100.
7. **You may <u>not</u> use a calculator.**

Section A

Calculate:

1. $314 + 445$

Answer:_____[1]

---

2. $1658 + 574$

Answer:_____[1]

---

3. $857 - 701$

Answer:_____[1]

---

4. $383 - 195$

Answer:_____[1]

---

5. $49.38 - 41.9$

Answer:_____[2]

Page total:

6. 87×9

Answer:_____[2]

---

7. $44667 \div 7$

Answer:_____[2]

---

8. $1254 \div 5$

Answer:_____[2]

---

9. 412×46

Answer:_____[2]

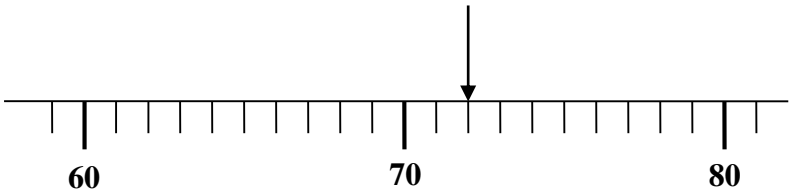
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10. $4550 \div 14$

Answer:_____[2]

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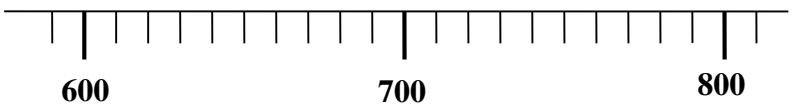
11. The diagram shows part of the scale of a weighing machine. The whole numbers show the weight in grams.



(a) What weight does the arrow show in grams?

Answer_____g [1]

Here is another scale which shows the weight in kilograms.



(b) Put an arrow on the scale to show 620 kg

[1]

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12. The rectangle shown below has an area of 72 cm^2 and its width is 8cm.

Not drawn to scale

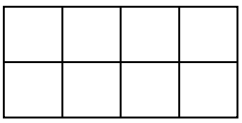


Calculate the length of the rectangle:

Answer_____ cm [2]

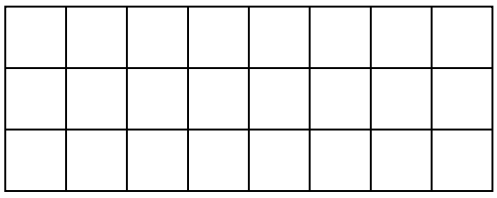
13.

(a) Shade in 75% of this shape



[1]

(b) Shade in $\frac{5}{8}$ of this shape

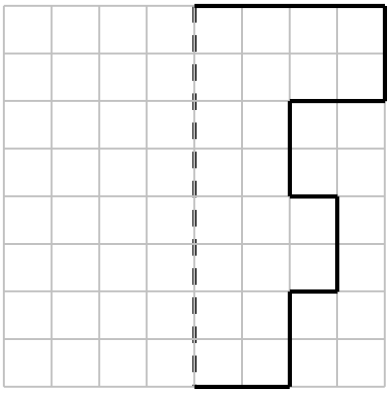


[2]

Page total:

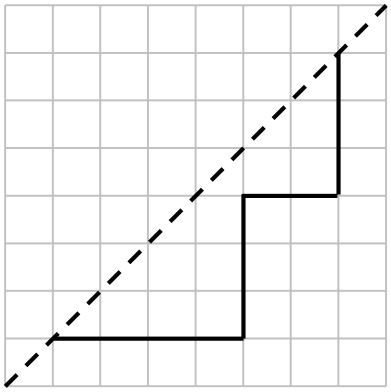
14. Complete these shapes so that the dotted lines are lines of symmetry. Make sure your lines are clearly visible.

(a)



[1]

(b)



[2]

---

15. Write numbers in the boxes below to make these sums correct.

(a) $37 + \square = 91$

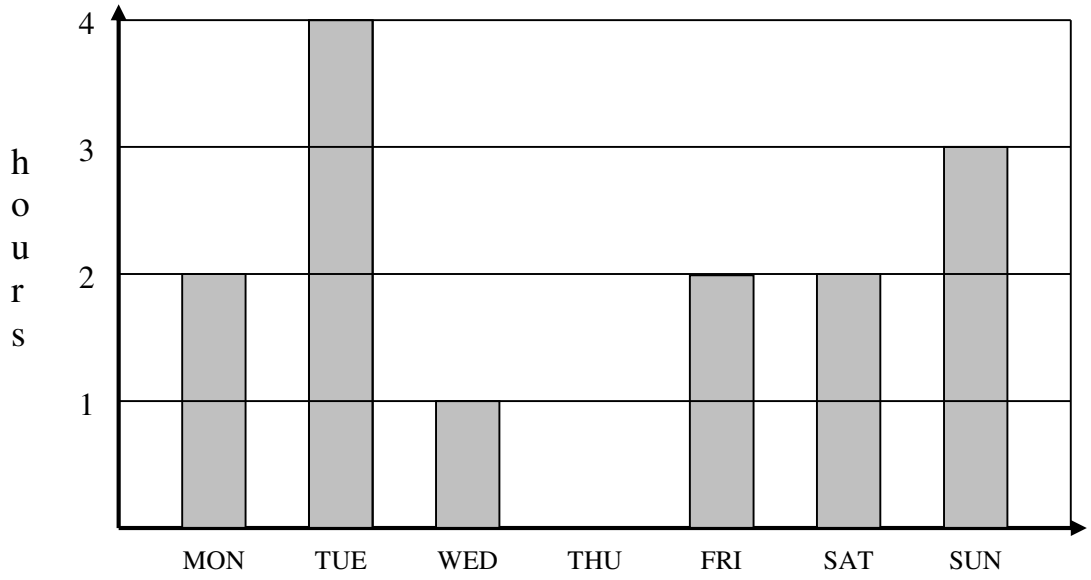
(b) $\square - 14 = 35$

(c) $8 \times \square = 152$

(d) $\square \div 16 = 9$

[4]

16.



The bar chart shows the number of hours Jason spent studying for his secondary school entrance exam in the first week of the Christmas holidays.

He spent a **total of 18 hours** revising during the week.

Draw in the bar showing how many hours he spent studying on Thursday.

[2]

---

17. Write numbers in the boxes below to make correct calculations.
You must use different numbers each time.

$\square \times \square = 12$

$\square \times \square = 12$

$\square \times \square = 12$

[3]

---

18. Laura sells some curtains at half price in a sale. If the sale price is £7.59 then what was the price before the sale?

Answer £_____[2]

---

19. Will buys six pens. Each pen costs 66p. He pays with a £10 note.

Work out how much change he should get?

Answer £_____[3]

Section B

20. Write down the missing terms in each of the sequences below:

a) 5 , 11, _____ , 23 , 29 , _____ ,

[2]

b) 100 , 50 , _____ , 12.5 , _____ ,

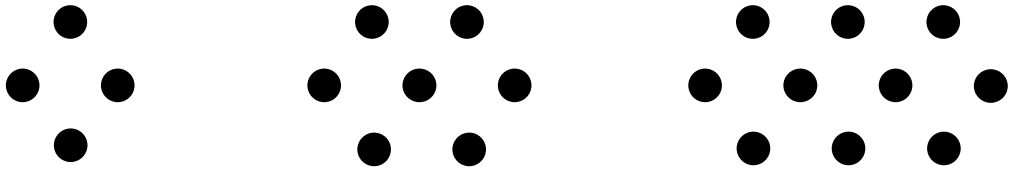
[2]

c) 1 , 1 , 2 , 3 , _____ , 8 , 13 , _____ ,

[2]

---

21. Here are some patterns of dots.



Pattern 1 Pattern 2 Pattern 3

(a) The pattern is continued. Complete the table below

Pattern number	1	2	3	4	5
Number of dots	4	7	10		

[2]

(b) How many dots would you need for the 150th pattern?

Answer_____[2]

---

22. Two shops sell packs of pens

Supermarket	**Village Shop**
Pack of **5** pens **£5.15**	Pack of **6** pens **£6.00**

I want to buy 30 pens.

In which shop is it cheaper to buy the 30 pens?

By how much is it cheaper?

The pens are cheaper in the _____ by £_____

[4]

23. Jonny and Jenifer went to the school canteen at break time.
Jonny bought two pears and three oranges. He paid 90p for them.
Jenifer bought two pears and one orange. She paid 50p for her fruit.

Work out, in pence, how much pears and oranges cost at their school canteen.

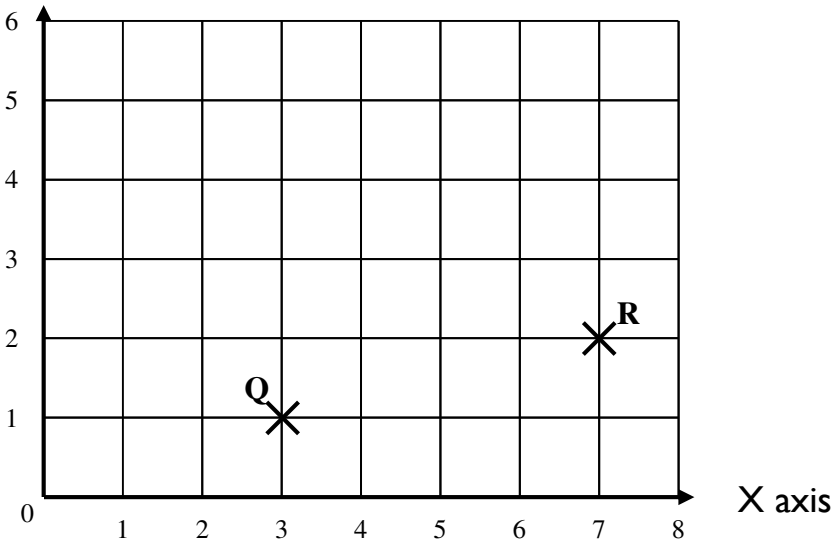
Cost of one pear _____p

Cost of one orange _____p

[4]

Page total:

24. Y axis



(a) Write down the coordinates of the point Q.

Answer (,) [2]

(b) Mark the point P which has coordinates (2, 5) on the diagram above

[1]

(c) Mark on the diagram the point S so that PQRS is a square and write down its coordinates

Answer (,)

[2]

---

25. Here are the prices of food and drinks in a café.

Food	Cost		Drinks	Cost
Pizza	£1.50		Tea	85p
Burger	£1.85		Coffee	80p
Sandwich	£1.15		Cola	£1.10
Toast	95p		Juice	£1.00

(a) Sally wants to buy one item of food and one drink.

What is the least amount of money she can pay?

Answer £_____[2]

(b) Lee buys one item of food and one drink. He pays with a £5 note and gets £2.40 change.

What did Lee buy?

Answer _____ and _____

[2]

---

26. Work out the number of boys and girls in each class below.

(a) In class 7Y, there are 27 pupils. There are twice as many boys as girls.

Number of boys	Number of girls

[2]

(b) In class 8K, there are 23 pupils. There are 5 more girls than boys.

Number of boys	Number of girls

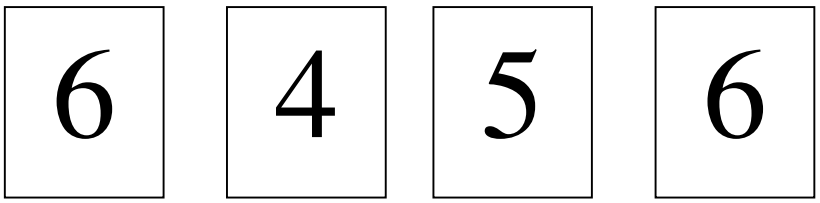
[2]

(c) Four builders take 20 days to build a certain wall. How long would it take five builders to build the same wall?

Answer_____[2]

---

27. Jeremy has 4 cards with the numbers 6,4,5 and 6 written on them as below:



(a) Write down the smallest number Jeremy can make using all of these cards

Answer_____

[1]

(b) How many different numbers can Jeremy make using all of the cards?

Answer_____[3]

Page total:

28. Fill in the missing numbers so that each row, each column and each diagonal adds up to 15.

2		
4		**8**

[2]

29.

Arrange all the numbers **1, 2, 3, 4 and 5** into two groups, so that doubling the sum of the first group gives the sum of the second group.

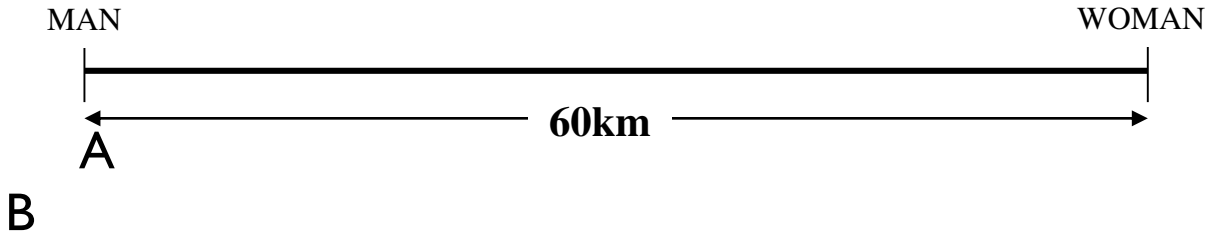
There are three different ways the numbers can be arranged. The first one is done for you.

First group	Second group
5	1, 2, 3, 4
……., …….	……,……..,……..
……., …….	……,……..,……..

[4]

---

30. A man can walk 4km in 1 hour and his wife can walk 6km in 1hour.
At 12 noon they begin walking at opposite ends of a 60km road.



(a) How far from A will they be when they meet?

Answer_____km [2]

(b) What time will they meet?

Answer_____pm [1]

31.

(a) Mandy thinks of a number.
She multiplies it by 7 and subtracts 20.
The answer is 36.

What number did Mandy think of?

Answer_____[2]

Page total:

(b) Jill thinks of another number.
She multiplies it by 8 and subtracts 41.
The answer turns out to be one more than the number she first thought of!

What number was Jill thinking of?

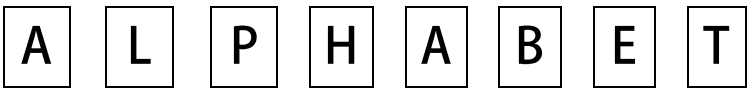
Answer_____[3]

---

32. The cards below have letters on one side, and the numbers 1, 2, 3, 4, 5, 6 and 7 on the other side (but not necessarily in this order on the cards).



You are told that:



adds up to 35

(a) Find the value of 

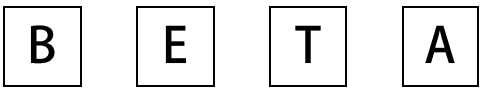
Answer: _____ [2]

You are also told that



adds up to 20.

(b) Work out what the following add up to.



Answer: _____ [2]

Page total:

33. There are 24 people in a room. 9 people are wearing socks and 6 people are wearing shoes, 4 people are wearing both. How many people are in bare feet?

Answer_____ [3]

---

34. Simplify the following fraction

$$\frac{26}{273}$$

Answer_____ [2]

Well done ! This is the end of the test.

Check that you have attempted all questions and that you have shown your workings and put the answers in the right place.

Page total: