Total Mark _____

Emanuel School

Entrance Exam

Mathematics

10+ Entry

Time Allowed: 1 HOUR

Surname	
First Name	
School	

Fill in the boxes above and read the following carefully:

1. Answer all 32 questions in the spaces provided in the space provided.
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. There is a total of 100 marks
6. **You may <u>not</u> use a calculator.**

1. Work out the following:

a) $7 + 6$

Answer _____[1]

---

b) $16 - 9$

Answer _____[1]

---

c) 12×4

Answer _____[1]

---

d) $42 \div 6$

Answer _____[1]

---

e) 11×5

Answer _____[1]

---

f) $60 - 38$

Answer _____[1]

---

g) $46 + 16$

Answer _____[1]

---

h) $72 \div 8$

Answer _____[1]

---

i) 9×9

Answer _____[1]

---

j) $91 \div 7$

Answer _____[1]

---

2. Work out the following

a) $67 + 54$

Answer _____[1]

---

b) $85 - 37$

Answer _____[1]

---

c) $518 + 266$

Answer _____[1]

---

d) $701 - 299$

Answer _____[1]

---

3. Work out 28 + 1461 - 745

Answer _____[2]

---

4. Work out the following

a) 17×5

Answer _____[1]

---

b) 76×6

Answer _____[1]

---

c) 248×13

Answer _____[2]

---

5. Work out the following

a) $5268 \div 4$

Answer _____[1]

---

b) $79{,}303 \; divided \; by \; 7$

Answer _____[2]

---

6. Add together

four hundred and ninety two

and

two thousand, six hundred and nine

Give your answers in figures

Answer _____[2]

---

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

$\square \times \square = 78$

$\square \times \square = 78$

$\square \times \square = 78$

$\square \times \square = 78$

[4]

8. Write down what the 2 stands for in 9024

Answer _____[1]

---

9. Sophie has £1.28. John has half as much as Sophie does. How much do they have together?

Answer £ _____[2]

---

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

a) 14 + ☐ = 87

b) ☐ – 26 = 75

c) 6 × ☐ = 84

d) ☐ ÷ 15 = 15

[4]

☐

11. Two shops sell yoghurt.

Food Mart	**Jim's Store**
Pack of **5** for **£1.80**	Pack of **3** for **£1.05**

Which shop will it be cheaper to buy 30 yoghurts? By how much is it cheaper?

The yoghurts are cheaper in _____

by _____

[4]

---

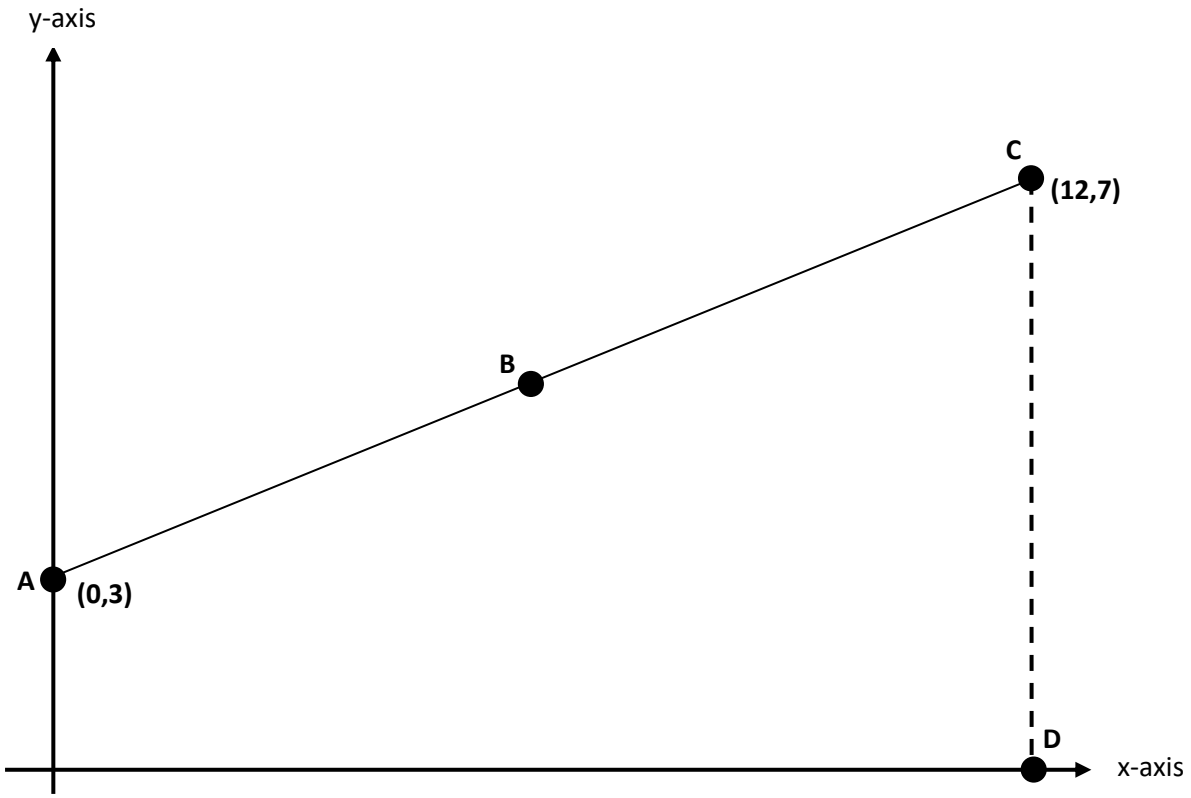
12. Alex and Jenny went to the school shop at break time.
Alex bought two pens and one pencil. He paid 79p for them.
Jenny bought two pens and four pencils. She paid £1.24 for them
Work out, in pence, how much pens and pencils cost at their school shop.

Cost of one pen _____p

Cost of one pencil _____p

[3]

13.



a) The points A, B and C are equally spaced.

What are the co-ordinates of the point B?

Answer (,)

[2]

---

b) Point D is directly below point C.

What are the co-ordinates of the point D?

Answer (,)

[2]

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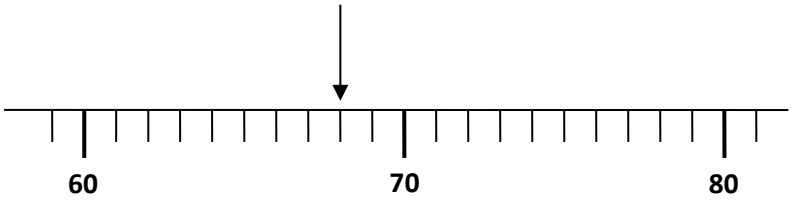
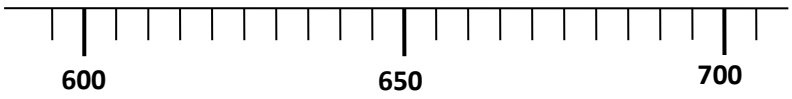
14. The diagram shows part of the scale of a weighing machine. The whole numbers show the weight in grams.



a) What weight does the arrow show in grams?

Answer_____grams [1]

Here is another scale which shows the weight in kilograms.



b) Put an arrow on the scale to show 685 kg

[1]

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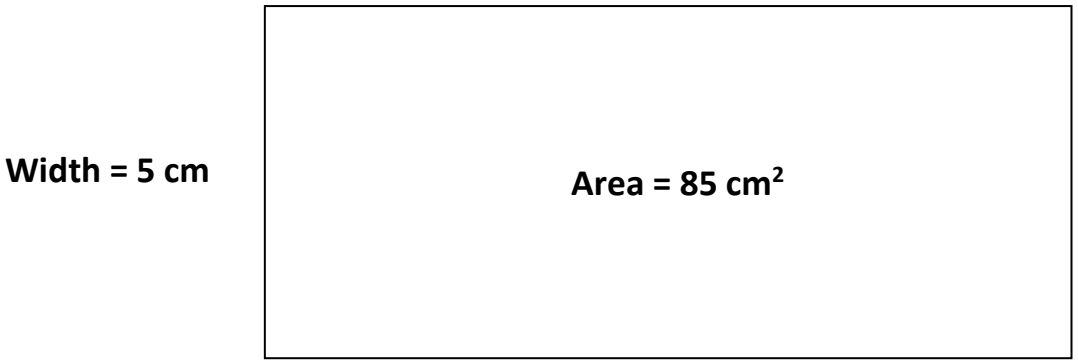
15. A piece of rectangular paper has a width of 5 cm and an area of 85cm^2.
Calculate the length of the paper



Answer _____ cm

[2]

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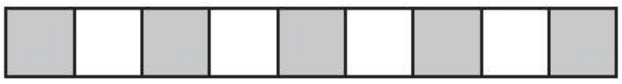
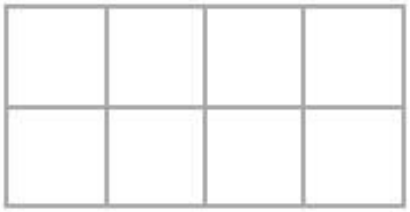
16. a) Write down the fraction of this shape that is shaded.



Answer _____[2]

---

b) Shade 25% of this shape



[1]

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17. Emma makes a cuboid using cubes

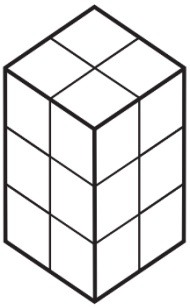
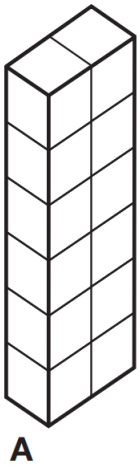
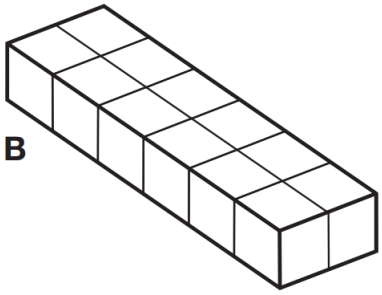
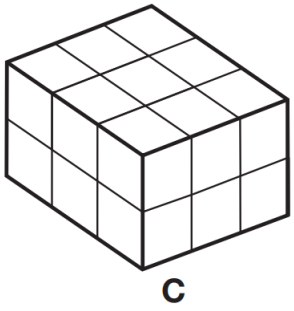


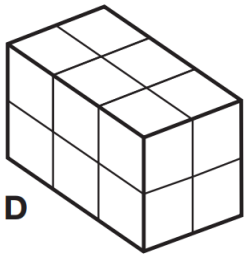
Diagram NOT accurately drawn

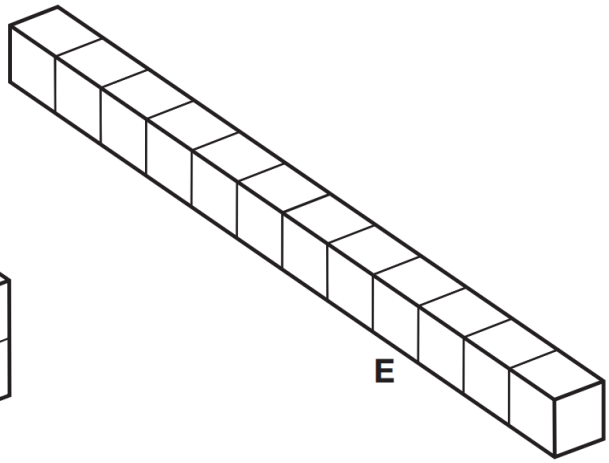
Write the letter of the cuboid that has a different volume from Emma's cuboid.





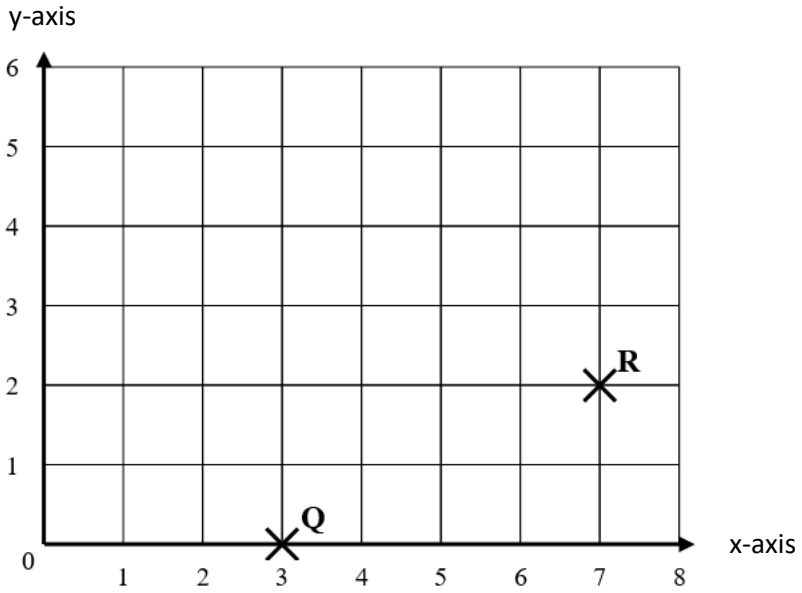






Answer _____[2]

18.



a) Plot the point P which has coordinates (1, 4) on the diagram above.

[1]

---

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

Answer (,)

[2]

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19. Here is a shaded shape on a centimetre grid.

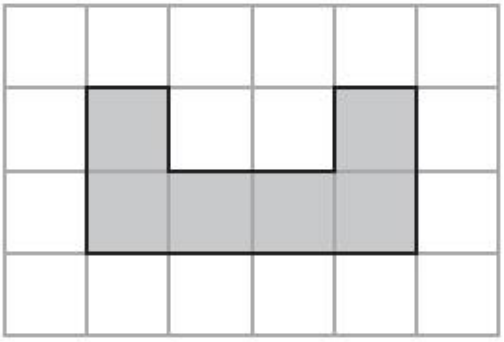


Diagram NOT accurately drawn

a) Find the area of the shaded shape.

Answer _____ cm^2 [1]

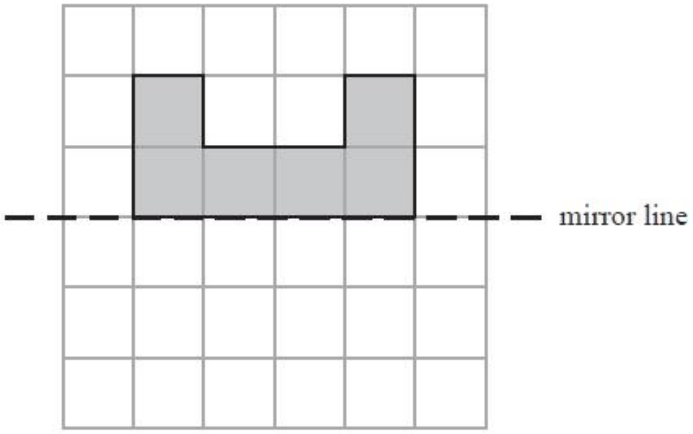
---

b) Find the perimeter of the shaded shape.

Answer _____ cm [1]

---

c) On the grid below, reflect the shaded shape in the mirror line.



[1]

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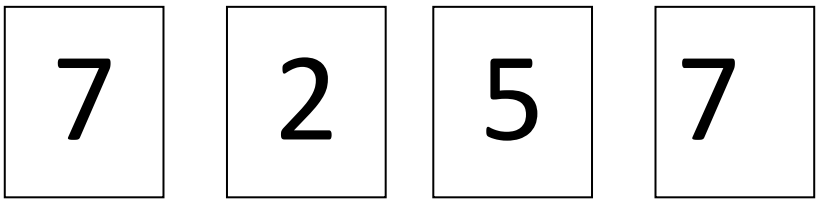
20. You can make different numbers using all of these four digit cards:



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

Answer _____[1]

---

b) Write down the biggest number you can make using all of these cards

Answer _____[1]

---

c) Write down the biggest odd number you can make using all of these cards

Answer _____[2]

---

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

Food	**Cost**		**Drinks**	**Cost**
Pizza	£1.40		Tea	65p
Burger	95p		Coffee	90p
Sandwich	£1.20		Cola	80p
Toast	90p		Juice	95p

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

What is the most amount of money he can pay?

Answer £_____[2]

---

b) Naomi buys one item of food and one drink. She pays with a £5 note and gets £3.40 change. What did Naomi buy?

Answer _____ and _____[2]

22.

Year	Number of countries that took part	Country where the games took place	Number of people that took part
1960	23	Italy	400
1980	42	Holland	2500
2000		Australia	

The table above shows information about the Paralympic Games.
a) More countries took part in 1980 than in 1960. How many more?

Answer _____[1]

---

b) In the year 2000, the games took place in Australia. 81 more countries took part in 2000 than in 1980. 1324 more people took part in 2000 than in 1980. Use this information to fill in the blank spaces in the bottom row of the above table.

[2]

23.
a) Convert 5 kilograms into grams

Answer _____grams [1]

---

b) Three packages weigh 352 grams, 39 grams and 5 kilograms.
Work out the total weight of the packages in grams.

Answer _____grams [2]

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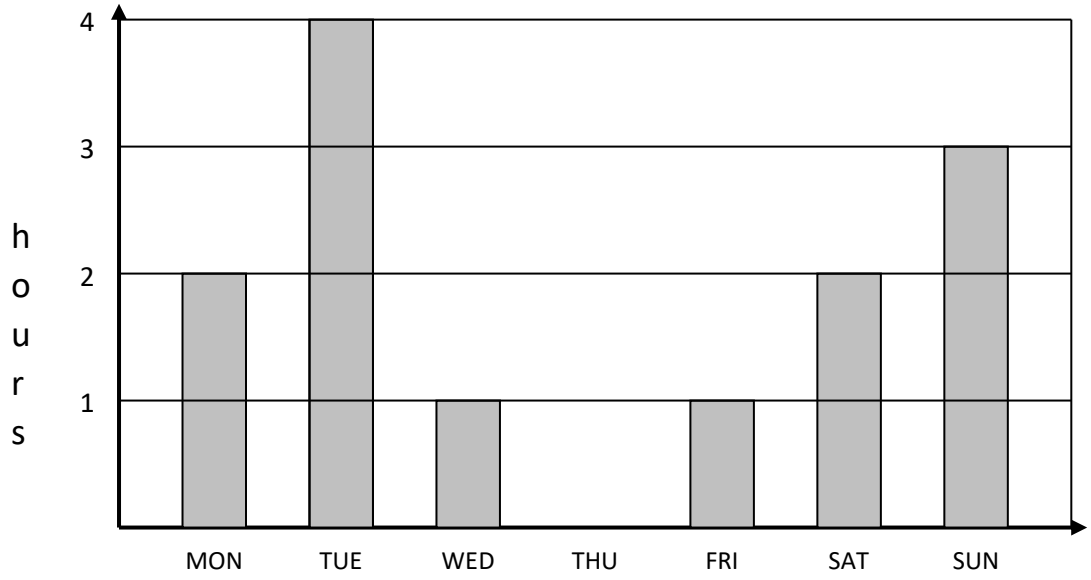
24. Four calculators cost £2.20. Work out the cost of seven calculators.

Answer £_____ [3]

25.



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 17 hours revising during the week.

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

[2]

---

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

a) In class 8M, there are 36 pupils. There are twice as many boys as girls.

Number of boys	Number of girls

[1]

---

b) In class 8K, there are 32 pupils. There are 4 more girls than boys.

Number of boys	Number of girls

[1]

27.

a) A number multiplied by itself is 49.

? × ? = 49

What is the number?

Answer _____[1]

---

b) Another number multiplied by itself three times is 64.

? × ? × ? = 64

What is this number?

Answer _____[1]

---

c) Another number multiplied by itself six times is 1.

? × ? × ? × ? × ? × ? = 1

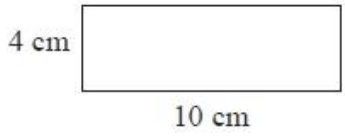
What is this number?

Answer _____[1]

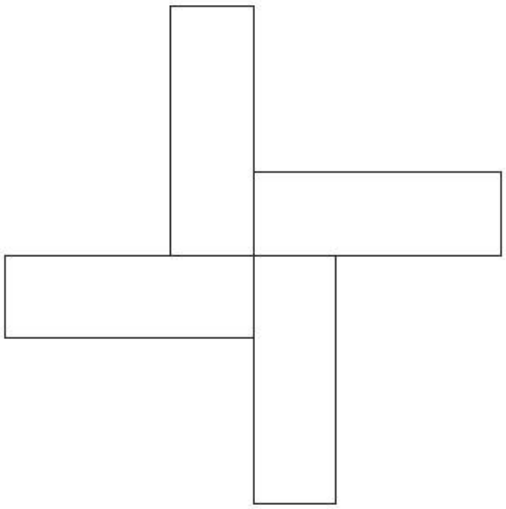
---

28. Here is a rectangle.

Diagram NOT accurately drawn



The 12-sided shape below is made from 4 of these rectangles.



Work out the perimeter of the shape.

Answer _____cm

[3]

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

		7
	9	**2**

[3]

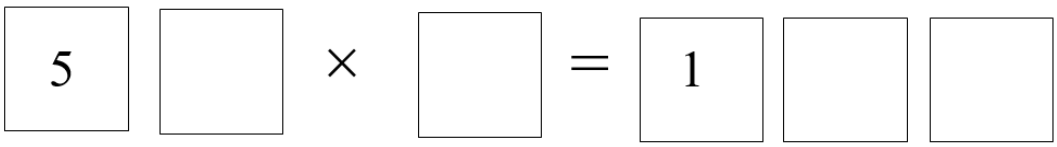
---

30. Jack thinks of a number.
He multiplies it by 8 and subtracts 23.
The answer is 65.
What number did Jack think of?

Answer _____[2]

---

31. Using each of the digits 1 to 6, put one digit in each box to make the statement true.
'1' and '5' have already been used.



[3]

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32. Adam, Barry and Charlie are brothers.
Here is some information about their ages

- Adam is twice as old as Barry
- Charlie is three years younger than Barry
- The sum of all their ages is 53

Use this information to work out how old Barry is.

Answer _____[3]

This is the end of the test. Go back and check your answers carefully.