

MATHEMATICS 11+ PRACTICE TEST 2 - NO CALCULATOR ALLOWED

(Suggested time: 60 minutes)

1.

$$\begin{array}{r} 5839 \\ + 468 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 4827 \\ - 698 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 378 \\ \times 23 \\ \hline \end{array}$$

4.

Write the number that is twenty three less than six thousand and five.

5.

What is the value at the arrow on this number line?



What is the value at the arrow on this number line?



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6.

Add < or > or = to these:

$\frac{5}{8}$ $\frac{7}{10}$

$\frac{4}{7}$ $\frac{6}{11}$

$\frac{33}{8}$ $\frac{22}{9}$

7.

Add the smallest number to the largest among these numbers.

100.001 100.010 100.011 100.101 100.110 _____

8.

I think of a number. I multiply it by 3, add 15 and then double the total.

I am left with 72.

What was the number I was thinking of? _____

9.

What is the value of x in this equation?

$$101 - x^2 = 37$$

What is the value of x in this equation?

$$15 + 5x = 169 - 9x$$

10.

A number is squared and then multiplied by 29. The result is 261.

What is that number? _____

11.

What time is exactly three hours and three quarters before 1.20 am? _____

12.

What fraction is exactly half way between $\frac{3}{7}$ and $\frac{5}{9}$? _____

13.

A parking station charges £4.75 per hour for the first two hours, £3.50 per hour for the next two hours after that, and then £2.25 per hour thereafter.

Desmond parked in this parking station for 9 hours. How much did Desmond pay? £ _____

Nancy parked from 11.37 am until 3.53 pm. How much did Nancy pay? £ _____

Carol parked from 14:42 until 21:35. How much change did she get from a £20 note? £ _____

14.

.1 .01 .8 .98 .09 .12

Which of these decimals is the largest in value? _____

Which of these decimals is the smallest in value? _____

Which two of these decimals are closest in value? _____ and _____

15.

What number is half way between 136 and 492? _____

16.

Order these events in their order of likelihood, from the least likely to the most likely:

- A: My birthday is on the 6th day of the month.
- B: My phone number ends in a 2.
- C: My father was born on a Wednesday.
- D: My mother was born on the 29th February.
- E: I roll a dice and get six.

17.

In a stocktake, a shop manager records that he has 1748 items in his snack section, containing chocolate bars, bags of crisps and bags of sweets. He also records this:

chocolate bars + bags crisps = 839

bags sweets + bags crisps = 1256

How many chocolate bars are there? _____

How many bags of crisps are there? _____

18.

At the school fete last year, £1420 was collected for charity.

At the school fete this year, £1491 was collected for charity

What was the percentage increase in the money collected for charity this year? _____ %

If there is the same percentage increase in money raised at the school fete next year,
how much money will be raised? £ _____

19.

A rectangular field is three times as long as it is wide.

It has a perimeter of 1.2 km.

What is its length? _____ m

What is its width? _____ m

What is its area? _____ m²

20.

A shop sells nuts and bolts by weight.

The nuts come in tins of 520. A tin of nuts weighs 1.6 kg. Nuts cost 15p per gram.

The bolts come in tins of 260. A tin of bolts weighs 2.2 kg. Bolts cost 18p per gram.

I buy 40% of a tin of nuts. How many nuts do I buy? _____

I buy 25% of the tin of bolts. How many nuts do I buy? _____

How much do I pay altogether? £ _____

21.

In Singapore, the time is 7 hours ahead of the time in London.

I catch a plane from London to Singapore that takes 13 ¹/₂ hours.

I leave at 11.15 pm on April 30th.

What is the date and time when I arrive in Singapore? day _____

time _____

I ring my friend in Los Angeles immediately upon arriving in Singapore.

The time in Los Angeles is 8 hours behind the time in London.

What time is it in Los Angeles when I ring my friend? time _____

22.

Ten years ago, the combined age of the four members of my family was 75 years.

What will the combined age of the members of my family be in 3 years? _____ years

23.

These are the marks attained by a group of children in their spelling tests:

Amber	84.7
Benjamin	93.4
Carol	90.1
Diana	74.9
Eddie	85.1
Fred	69.3
Graham	78.6

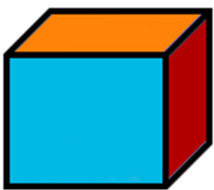
What was the average mark across the class? _____

What was the spread of marks for the class? _____

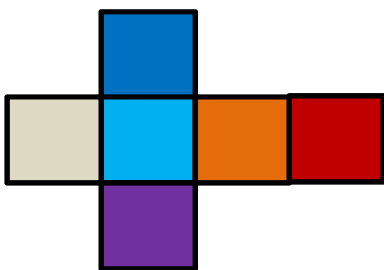
Which two children had the closest marks? _____ and _____

24.

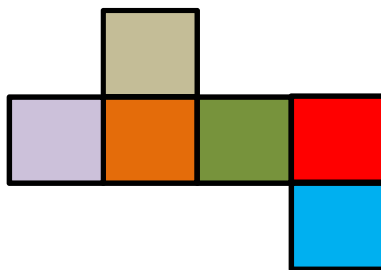
Which of the nets below is the net of this cube? _____



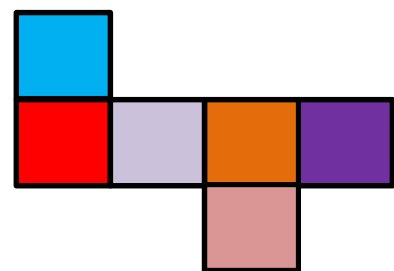
A.



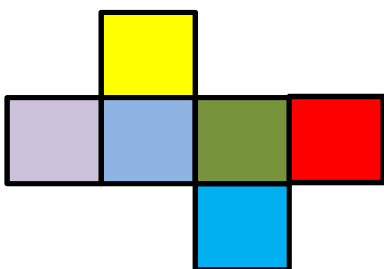
B.



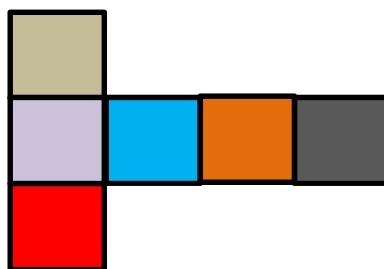
C.



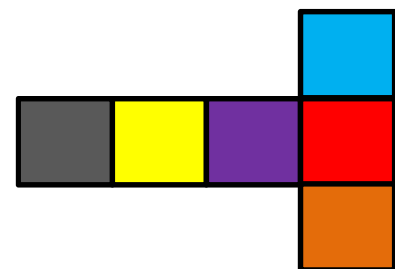
D.



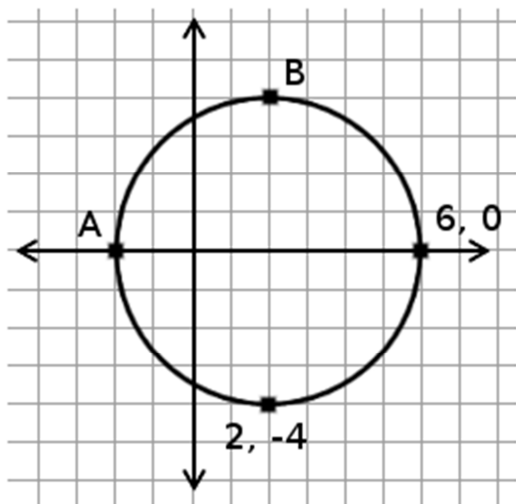
E.



F.



25.



What are the co-ordinates of point A? _____

What are the co-ordinates of point B? _____

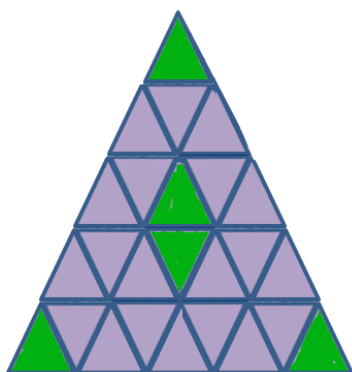
Are the following co-ordinates inside or outside the circle?

5, -2 _____

-2, -2 _____

-1, 4 _____

26.



This diagram shows a section of flooring, with green and purple tiles.

What percentage of the tiles in this section of flooring are coloured green? _____

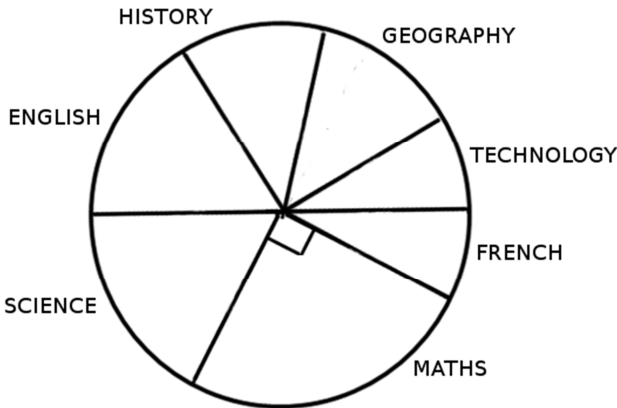
How many purple tiles would need to be changed to green in order for

60 % of the tiles to be green? _____

Marks: ___ / 7

27.

Last week, I had classes for 36 hours in the week.



What percentage of the classes in the week were Maths classes? _____ %

12.5 per cent of the week's classes were History.

How many hours of History classes were there? _____ hours

The class had Technology to History classes at a ratio of 2:3.

How many hours of Technology classes were there? _____ hours

One sixth of the classes in the week were Science classes.

What was the ratio of Science to Technology classes? _____

28.

Three buses leave Grisham and go to Asher.

The bus on route A takes 15 minutes to travel to Asher. These buses leave Grisham every 15 minutes.

The bus on route B takes 25 minutes to travel to Asher. These buses leave Grisham every 40 minutes.

The bus services commence at 6.30 am, when a bus leaves on each route.

What is the next time at which two buses leave Grisham, one on each route? _____

What is the first time in the day when buses arrive at Asher at the same time? _____

Marks: ___ / 6

TOTAL MARKS _____ / 60

(Multiply your mark by 1.67 for percentage mark.) (_____ %)