MATHEMATICS 11+ PRACTICE TEST 3- NO CALCULATOR ALLOWED
(Suggested time: 60 minutes)

1.

```
  3975
+  749
───────

───────
```

2.

```
  3707
-  598
───────

───────
```

3.

```
   386
x   35
───────

───────
```

4.

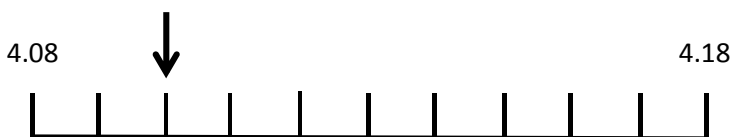Write the number that is forty eight less than fifty thousand and sixteen. _____

5.
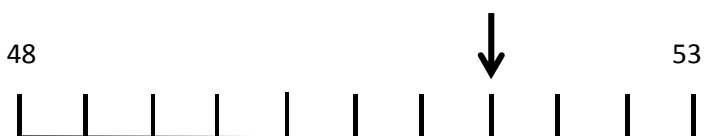
What is the value at the arrow on this number line? _____
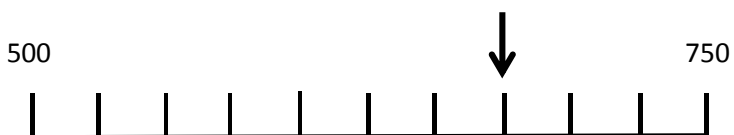
500   750

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

4.08   4.18

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

48   53

Marks: ___ / 7

6.

Add **<** or **>** or **=** to these:

$^5/_6$ ☐ $^7/_9$

$^4/_{11}$ ☐ $^{13}/_{33}$

$^{17}/_4$ ☐ $^{19}/_5$

7.
Write the number between 113 and 137 which is divisible by both 6 and 7.   _____

8.
Arrange these fractions in order, from smallest to largest:

$^5/_8$ $^4/_9$ $^6/_{11}$ $^5/_7$ $^3/_5$

_____   _____   _____   _____   _____

9.
A rocket has travelled a distance of 795 342 863 km into space. Its odometer looks like this:

795 342 863

To the nearest thousand, how far has the rocket travelled?   _____ km

When the rocket has travelled a further 53 000 km, how far will it have travelled?   _____ km

When the 9 on the odometer changes to a 3, how many more kilometres
      will have been travelled?   _____ km

How many times greater is the 3 to the left on the odometer to the 3 on the right?   _____

10.
Subtract the smallest number from the largest among these numbers.

9.990   9.909   9.099   9.009   9.090   _____

11.

$2x + 17$ $\qquad$ -1 $\qquad$ $2x + 1$ $\qquad$ $x - 1$ $\qquad$ $2x - 1$ $\qquad$ $x - 17$

Which of the above is equivalent to:

$(x + 8) + (x - 9)$ _____

$(2x - 8) - (x + 9)$ _____

12.

In a maths test, I mistakenly multiplied a number by 9, when I should have divided it.
My result was 243. What should my result have been? _____

13.

What is ψ?

$$
\begin{array}{cc}
 & 4\ \psi \\
\times & \psi \\
\hline
4\ & 4\ 1
\end{array}
$$

_____

14.

There are 64 children in my year at school.

One quarter of them travel to school on the school bus. Three eighths of them travel to school by car.
One eighth of the children ride a bike to school. The rest of the children walk.

How many children travel by either car or school bus to school? _____

What percentage of the children walk to school? _____ %

What is the ratio of those who go by car to those who ride a bike to school? _____

15.

Jan and Denis each bought the same packet of pens, but at different shops.

Jan bought the packet of pens at 15% off the recommended price.
Denis bought the packet of pens at 20% off the recommended price.
Jan paid 40p more than Denis.
What was the recommended price of the packet of pens? £ _____

What did Denis pay for his packet of pens? £ _____

Marks: ___ / 9

3

16.

I have 4 large boxes and 10 small boxes.

A large box holds 14 cans of tomato soup and a small box holds 6 cans of tomato soup.

I need to store 96 cans of tomato soup in the boxes.

What is the smallest number of boxes I can use?   _____

17.

Layla bought 4 lollipops and 3 gumdrops for 93p.

Rory bought 8 lollipops and 7 gumdrops for £2.01.

How much does a lollipop cost?   _____ p.
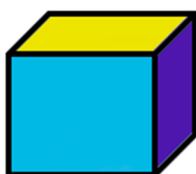
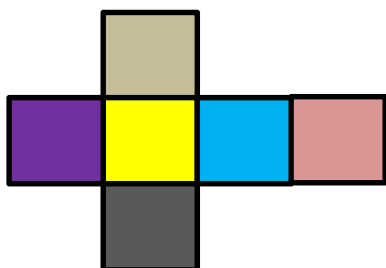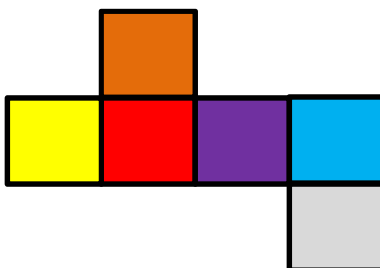How much does a gumdrop cost?   _____ p.

18.

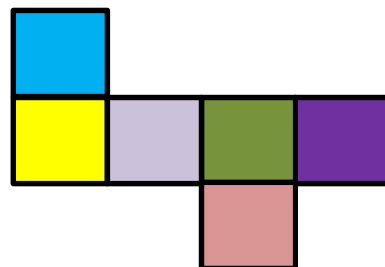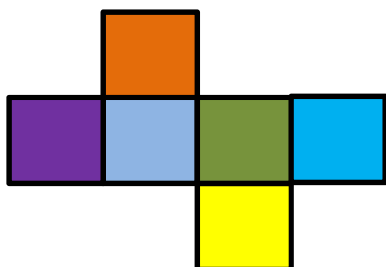Which of the nets below is the net of this cube?   _____
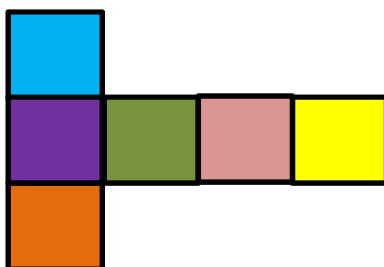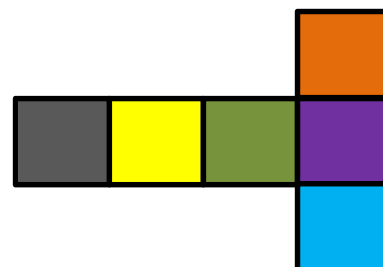

A.

B.

C.

D.

E.

F.

Marks: ____ / 4

19.

I bought 11 square metres of lino flooring.
The shop assistance gave me £6.50 change from a £100 note.

How much was the flooring per square metre?   _____

20.

Jane watches television for an average of 3 hours and 34 minutes every week.
How much television does she watch in a year?   _____
This week, Jane watched television from 4:37 until 6:05 on Wednesday and then
        from 6:52 until 9:28 on Saturday.
How much did she exceed her weekly average this week?   _____

21.

Below is a sequence of numbers.
With each step in the sequence, the same number is subtracted:

__   __   32   __   __   __   __   __   __   -52   __

What is the first number in this number sequence?   _____

What is the last number in this number sequence?   _____

22.

Bill buys a number of items of clothing at a shop. On his bill, it records that VAT (Value Added Tax) has been added to each of his purchases, at a rate of 20 %
How much VAT did Bill pay on these items, and what was the total cost of Bill's outfit?

Item	Cost before VAT	Total cost of item
Shirt	£25.00	_____
Trousers	£40.00	_____
Belt	£8.00	_____
TOTAL COST		_____

Marks: ___ / 9

5

23.

Row 1
Row 2
Row 3
Row 4
Row 5
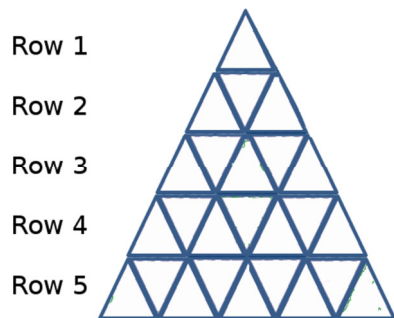
Which row has 4% of the tiles in this triangle?   _____

Which row has $^1/_5$ of the tiles in this triangle?   _____

If the pattern of these rows of tiles increased at the same rate in Rows 6, 7, 8 and so on,
    how many tiles would be in Row 20?   _____

Which of the three formula below (A, B or C) shows how many tiles would be in Row *x*?

    (A) $x^2 + 5$ (B)   3(x - 1)   (C)   2x - 1   _____

24.
I turn 60 degrees anti-clockwise.
Then I turn 45 degrees clockwise.
Then I turn 110 degrees anti-clockwise.
Finally, I turn 90 degrees clockwise.

I wish to return to my original position, by the smallest possible turn.
In what direction and how many degrees should I turn?   Direction: _____

                                                                Degrees: _____ °
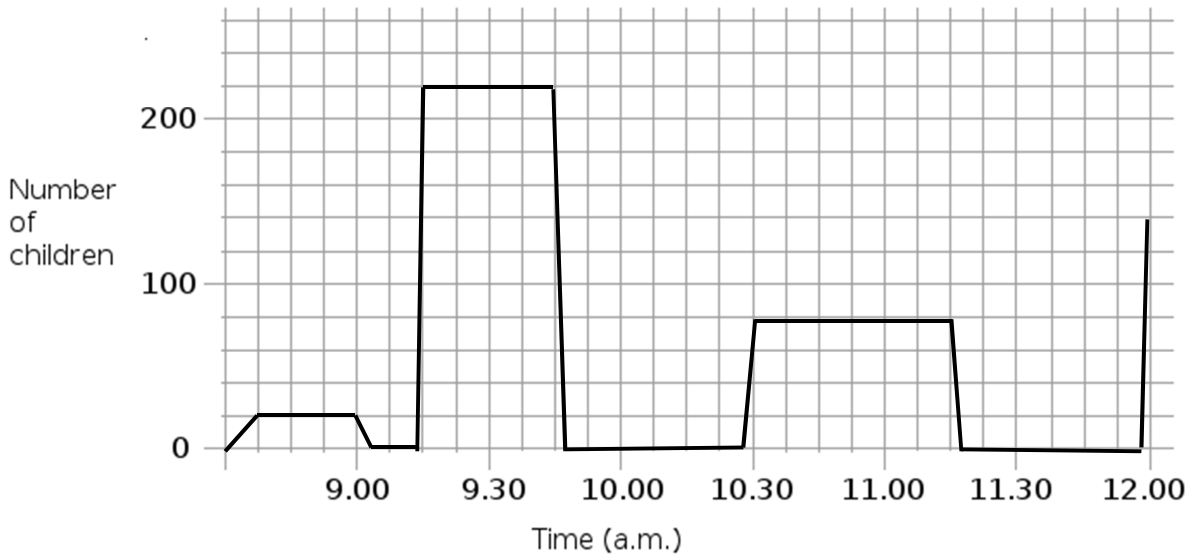
25.
Grant is giving out sweets to two friends.

He gives sweets to Andrew and Suri in the ratio of 5:3. Suri receives 18 sweets.
How many sweets does Andrew receive?   _____

If Grant had shared the sweets evenly between Andrew and Suri, how many
    would each have received?   _____

Marks: ____ / 8

26.

This graph shows how a school hall is used during the course of a particular morning.

How many children attend the preschool club from 8 - 9 a.m.? _____

From 9.15 until 9.45 is morning assembly, which all the children attend. How many
children are there in the school? _____

During that morning, Years 1 and 2 had a gym class in the school hall.
How long was their class? _____ mins

27.
The local shop sells cat food in these sizes:

A	B	C	D	E	F
2 kg	750 g	1.5 kg	400 g	250 g	1 kg
£ 3.50	£1.50	£2.65	95p	45p	£1.95

Which of these cans represents the best value for money? _____

Which is the next best value? _____

Which cat food is the most expensive? _____

Marks: ___ / 6

28.

In a symbolic system, there are five values: ← → ↑ ↓ ↕

If:

→ = ← + ←

and

→ + ↓ = ← + ↑

and

→ + ↑ = ↓ + ↕

Which symbol is the equivalent of these?

→ - ←   _____

← + →   _____

↓ + ←   _____

Marks: ___ / 3

TOTAL MARKS   _____ / 60

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

8