



BENENDEN

Lower School Entrance 2020

MATHEMATICS

11+

1 Hour

Name:
School:
Date:

Equipment required: pen, pencil, ruler, eraser.

Instructions to Candidates:

- 1 Attempt all the questions. Do not worry if you don't manage to do them all.
- 2 Calculators may not be used.
- 3 Show ALL your working.
- 4 Check your answers for accuracy.
- 5 Total points for the test: 100.

1. Work out the following:

a) $3426 + 6825$

b) $4008 - 259$

.....

.....

c) 470×32

d) $15\,428 \div 7$

.....

.....

(8)

2. Write the following numbers in order (smallest to largest):

4.41

0.414

0.4

0.1444

1.4

.....

(2)

3. List all the numbers between 40 and 50 (inclusive) which are:

a) square

b) prime

c) multiples of 4

d) divisible by 3

(7)

4. Write in figures the number "fifty thousand, seven hundred and six":

.....

(1)

5. The temperature in Benenden Village on Christmas Day was -1°C at 06:00 in the morning.

a) By 09:00 it had risen by 4 degrees. What was the temperature at 09:00?
..... (1)

b) At noon the temperature was 11°C . By how many degrees had it changed since 09:00?
..... (1)

c) After noon, the temperature fell by 1.5 degrees each hour. What was the temperature at 18:00?
..... (1)

d) What is the difference between the temperatures at 6am and 6pm?
Which was cooler?
.....
..... (2)

6. Using the following digits (once only)

9 2 4 7 1

a) Write down the smallest 4-digit number possible (1)

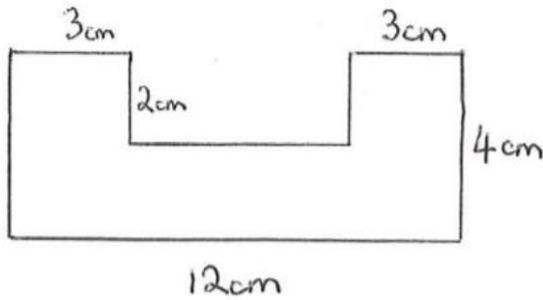
b) Write down the largest 3-digit number possible (1)

c) Find the difference between the two numbers
..... (2)

d) Find the number which is half-way between the two numbers
..... (2)

7. Find the perimeter and the area of each of the following shapes, in which all the angles are rightangles, but which are **NOT DRAWN TO SCALE** :

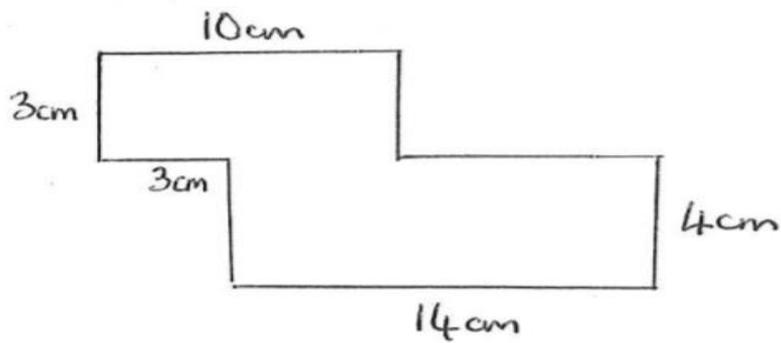
a)



Perimeter: (2)

Area: (2)

b)



Perimeter: (2)

Area: (2)

8. Tick the correct statement below:

Is the answer to 32.6578×32.6578

- a) Below 100?
- b) Between 100 and 1 000?
- c) Between 1 000 and 1 100?
- d) More than 1 100?

(2)

9. Work out the following:

a) $\frac{1}{6}$ of £12.78

b) 40% of £120

.....

.....

c) $3\frac{2}{3} - 1\frac{1}{4}$

.....

(7)

10. Label each arrow with the number it indicates on the scale:



(2)

11. Write T (True) or F (False) next to each statement:

- a) $\frac{4}{100} = 0.4$
- b) $\frac{12}{60} = \frac{2}{30}$
- c) 3.2 hours = 3 hours and 12 minutes
- d) 54 divided by $\frac{1}{2}$ is 27 (4)

12. Mr Leong had five pieces of wood, of the following lengths:

305cm, 2.95m, 225cm, 3.6m, 3.15m

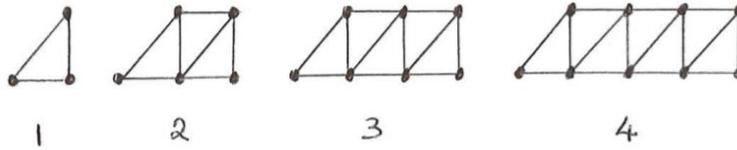
Work out

- a) The mean length (3)

- b) The median length (2)

- c) The range of the lengths (2)

13. Look at the diagrams below, consisting of dots and lines:



a) Draw the 5th diagram in the sequence

(2)

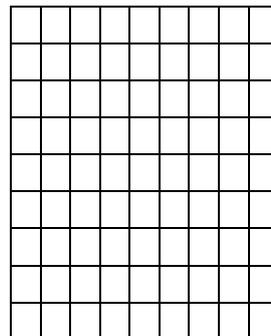
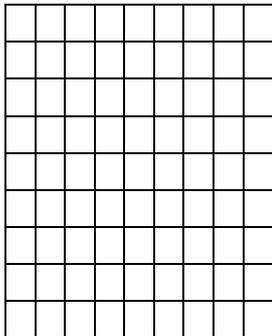
b) How many triangles will there be in the 10th diagram?

..... (2)

b) How many dots will there be in the 20th diagram?

..... (2)

14.



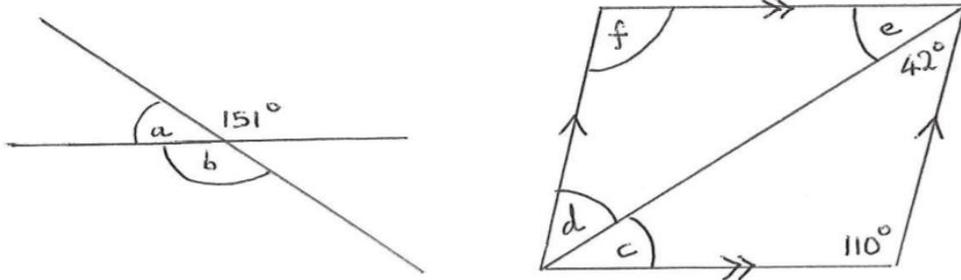
a) On the first grid above, shade $\frac{1}{3}$ of the total area. (1)

b) On the second grid, shade $\frac{6}{9}$ of the total area. (1)

c) Write down the fraction (in its simplest form) of the area which remains unshaded in each:

a) b) (2)

15. Calculate the angles labelled *a* to *f* in the diagrams below. The diagrams are **NOT DRAWN TO SCALE** :



a =, *b* =, *c* =, *d* =, *e* =, *f* = (6)

16. Write down the year in which you were born.

.....

a) Round this number to the nearest 10 (2)

b) Round the number to the nearest 100 (2)

c) Round the number to the nearest 1000 (2)

If 1 July was a Sunday in a particular year, what day of the week was Christmas Day?

(3)

17. Bahia has arranged to meet her friend Emma at 15:30, at a coffee shop which is five minutes' walk from the station in Greyton.
She has to catch a train in Aliston.

The journey takes 40 minutes from Aliston to Greyton. There are trains at:

11:05, 11:35, 12:05, 12:35, 13:05, 13:35, 14:05, 14:35, 15:05, 15:35, 16:05 etc.

- a) What is the latest train Bahia can catch, so as not to be late meeting Emma?

..... (2)

- b) Bahia does catch this train and it arrives on time. She walks straight to the coffee shop and waits there for her friend. Emma is late and arrives when Bahia has been sitting there for 15 minutes. At what time does Emma arrive at the coffee shop?

..... (2)

- c) While she waits, Bahia looks at the clock in the coffee shop.
What angle does the minute hand turn through between 15:25 and 15:35?

..... (2)

18. Maisie bought some packets of sweets which were priced as follows:

- Raspberry Creams: £1.65 (for a packet of 15)
- Pineapple Jellies: £1.50 (for a packet of 10)
- Lemon Sours: £1.60 (for a packet of 20)

Maisie makes 30 small boxes of mixed sweets to sell at the school summer fair. Each box has 1 Pineapple Jelly, 2 Lemon Sours and 3 Raspberry Creams.



a) How many packets of each type of sweet does she need to buy?

..... (4)

b) How much will she spend in total, when buying the sweets?

..... (4)

c) If she sells her boxes for £1 each, how much profit will she make?

..... (2)

END OF TEST.

Check your work carefully and then, if you have time, try the following puzzles:

