

Please check the examination details below before entering your candidate information

Candidate surname

Other names

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Core Paper

May 2021

Morning (Time: 45 minutes)

Paper Reference **Practice Paper**

Mathematics

Paper 1 (Non Calculator)

Year 7

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- **Calculators may not be used.**

Information

- The total mark for this paper is 70
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

- 1 Complete the next three numbers in the sequence. (1)

4, 7, 10, 13, _____, _____, _____

2. a Write down these expressions without using an operation. (4)

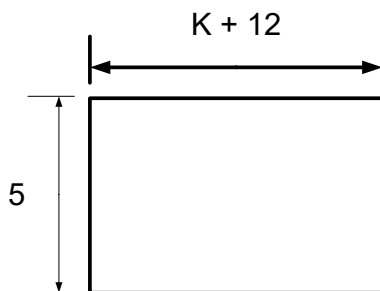
i $a + a + a + a =$

ii $t \div 5 =$

iii $r - r - r =$

iv $3 \times (t + t + t) =$

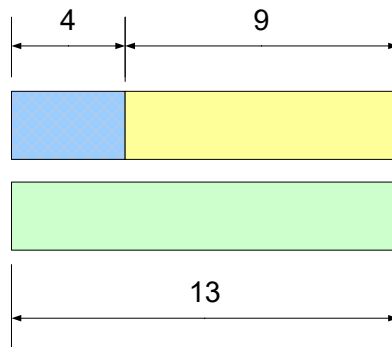
- b The diagram below shows an oblong with the sides given in terms of k.



- i Give an expression for the perimeter of the shape. (2)

- ii Give an expression for the area of the shape. (2)

- 3 a Write four expressions for what this bar model shows. (2)



- b Draw a bar model to represent the following expression. (2)

$$3 \times p = 27$$

- 4 State whether the following are always true, sometimes true or false, given that m , p and k are always greater than 2. (3)

	Always True	Sometimes True	False
$3p + 5 = 5 + 3p$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$12 - p = p - 12$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$\frac{m}{2} = \frac{2}{m}$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5 Bill thinks of a number n . His number is an integer.

a $n > 20$. Write down the five lowest possible values of n . (1)

b $20 < n < 25$ Write down all the possible values of n . (1)

6 a Round the following numbers to 2 significant figures. (2)

i 90.892

ii 8292

b Put these numbers into order. (2)

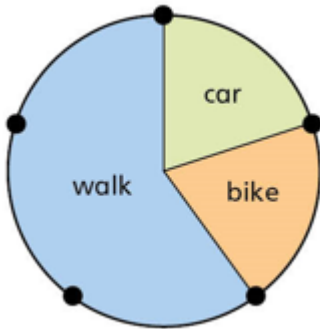
29 902 9.2 -2.9 -92 2.09 -9.02 -9.2

7

a Draw a line matching the fraction, the decimal and the percentages to each other. The first one has been done for you. (2)

$\frac{2}{5}$	0.4	75%
$\frac{7}{10}$	0.75	70%
$\frac{3}{4}$	0.13	26%
$\frac{13}{50}$	0.7	40%
	0.26	13%

b Look at the pie chart below. (3)



What proportion of the children walk to school?

Give your answer as:

Decimal _____

Fraction _____

Percentage _____

8 Each month, I keep a budget showing how much I have to spend on bills.

Below is part of that budget.

By completing the balance sheet below, determine the cost of the gas bill. (5)

Date	Item	Income	Debit	Balance
01/04/2021	Balance from previous month			3,948.97
12/04/2021	Macmillan Nurses		8.96	
15/04/2021	Pay from School	1,899.94		
26/04/2021	Broadband		54.99	
26/04/2021	Website hosting		11.67	
26/04/2021	Gas			5555.92

9 a What is the highest common factor of **40** and **64**? (2)

b What is the lowest common multiple of **6** and **15**? (2)

10 a What is 25% of 84? (1)

b Increase 150 by 40%. (2)

c Decrease 60 by 25%.

(2)

d Kerri purchased two bottles of perfume. (3)

The store was closing down and it said that there was 50% off the price of all goods.

One of the bottles of perfume was advertised at £30 before the saving.

Overall, Kerri paid £45.

How much was the original price of the other bottle of perfume?

11 Evaluate these expressions when $a = -3$, $b = 7$, $c = -5$ and $d = 12$.

(2)

a $\frac{4a}{d} + c =$

b $\frac{5a+c}{c} =$

12 a $\frac{2}{7} + \frac{3}{7} + \frac{1}{7} =$ (1)

b $\frac{2}{5} + \frac{3}{15} =$ (1)

c $\frac{2}{3} + \frac{3}{4} =$ (1)

d $3\frac{5}{6} - 2\frac{1}{5} =$ (2)

13 a $5 + (-6) =$ (1)

b $12 \times (-3) =$ (1)

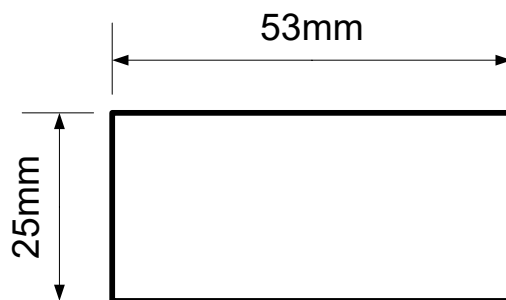
c $(-12) - (-18) =$ (1)

14 Find the value of p in the following equations

a $4p + 12 = 44$ (2)

b $\frac{2}{p} + 12 = 52$ (2)

15 Look at the oblong below. (4)

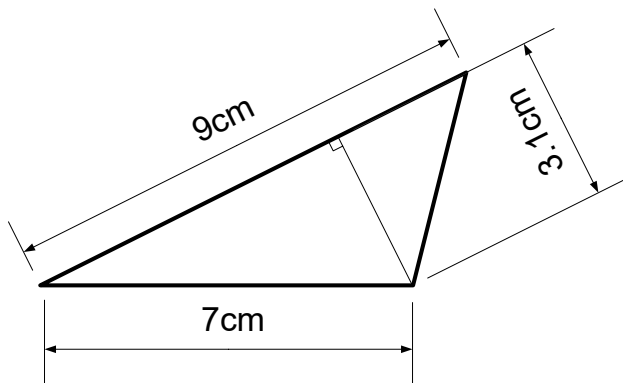


What is the area of the oblong? Give your answer in cm^2 .

_____ cm^2

16 Look at the triangle below.

(4)



What is the area of the triangle in mm^2 ?

_____ mm^2

17 Write the following in ordinary form

(2)

a $4.243 \times 10^3 =$

b $7.83 \times 10^{-2} =$

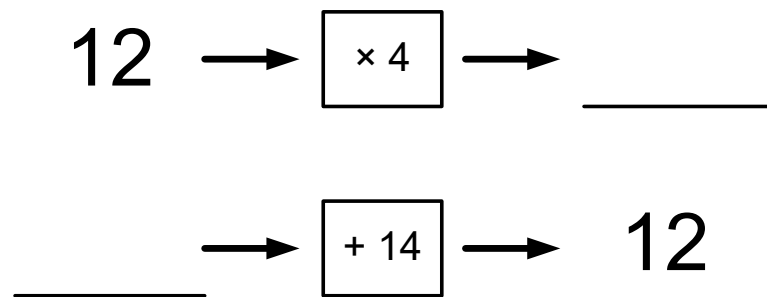
18 Write the following numbers in standard form

(2)

a $87 =$

b $0.0038 =$

19 Fill in the blanks in the function machines below. (2)



20 Put these numbers into order starting with the lowest. (2)

0.208, 4.7×10^{-4} , -3.8, 1.2×10^2 , 44