Name: _____

Year 7 End of Year Paper

Envision Tuition

MATHEMATICS TUTORS

Date:

Time: 60 Minutes

Total marks available: 50

Total marks achieved: _____

ENVISION TUITION

Questions

Q1.

Write down the value of the 7 in the number 1074

.....

(Total for question = 1 mark)

Q2.

Write 180 minutes in hours.

..... hours

(Total for question = 1 mark)

Q3.

Change 530 centimetres into metres.

..... metres

(Total for question is 1 mark)

Q4.

Write the following numbers in order of size.
Start with the smallest number.

0.32 0.4 0.35 0.309

.....

(Total for question = 1 mark)

Q5.

Write the following numbers in order of size.
Start with the smallest number.

8 –7 –10 1 0 –2

.....

(Total for question = 1 mark)

Q6.

Work out 20 ÷ (3 + 2)

.....

(Total for question = 1 mark)

Q7.

Write down a factor of 60 that is between 8 and 14

.....

(Total for question = 1 mark)

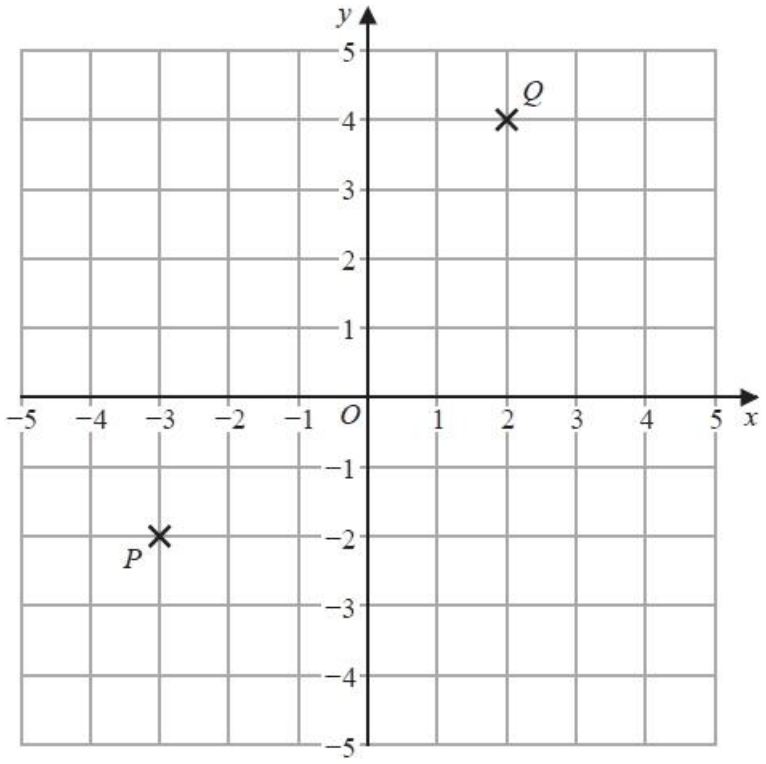
Q8.

Write 0.09 as a fraction.

.....

(Total for question = 1 mark)

Q9.



Find the coordinates of the midpoint of *PQ*.

(..... , ...)

(Total for question = 2 marks)

Q10.

Write down an example to show that each of the following two statements is **not** correct.

(a) The factors of an even number are always even.

.....

(1)

(b) All the digits in odd numbers are odd.

.....

(1)

(Total for question = 2 marks)

Q11.

One day Sally earned £60
She worked for 8 hours.

Work out Sally's hourly rate of pay.

£.....

(Total for question = 2 marks)

Q12.

Margaret is going to have a meal.
She can choose one starter and one main course.

Menu

Starter	Main course
Pate	Beef
Melon	Salmon
Ham	Lasagne

Write down all the possible combinations Margaret can choose.

.....

.....

.....

.....

.....

.....

.....

(Total for Question is 2 marks)

Q13.

There are only 7 blue pens, 4 green pens and 6 red pens in a box.

One pen is taken at random from the box.

Write down the probability that this pen is blue.

.....

(Total for question = 2 marks)

Q14.

(i) Write down the next two terms in this number sequence.

100 95 90 85 ....

(ii) Explain how you got your answer.

.....

.....

(Total for question = 2 marks)

Q15.

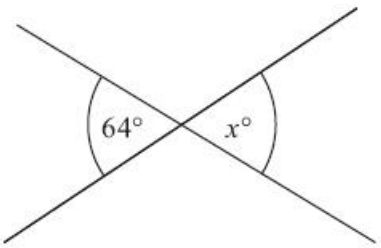


Diagram **NOT** accurately drawn

(i) Find the value of *x*.

x =. . . . . .

(ii) Give a reason for your answer.

.....

.....

(Total for Question is 2 marks)

Q16.

(a) Write down the value of $\sqrt{49}$

.....

(1)

(b) Write down the cube of 3

.....

(1)

(Total for Question is 2 marks)

Q17.

Write the following fractions in order of size.
Start with the smallest fraction.

$\frac{1}{3}$ $\frac{3}{4}$ $\frac{1}{4}$ $\frac{7}{12}$ $\frac{1}{2}$

.....

(Total for question = 2 marks)

Q18.

(a) Work out $\frac{1}{5}$ of 70

.....

(1)

Fiona has to work out the exact value of $48 \div \frac{1}{2}$

She writes

$48 \div \frac{1}{2} = 24$

Fiona's reason is,

"There are 2 halves in 1, so there will be 24 halves in 48"

(b) Explain what is wrong with Fiona's reason.

.....

.....

.....

(1)

(Total for question = 2 marks)

Q19.

(a) Work out $\frac{2}{3} - \frac{1}{5}$

.....

(2)

(b) Work out $\frac{2}{3} \times \frac{3}{4}$

Give your answer as a fraction in its simplest form.

.....

(2)

(Total for question = 4 marks)

Q20.

Here is a solid cuboid.

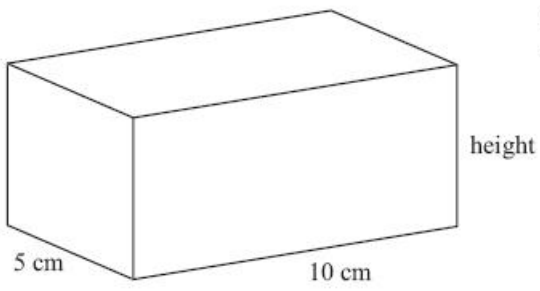


Diagram **NOT** accurately drawn

The cuboid has a width of 5 cm and a length of 10 cm.
The cuboid has a total surface area of 280 cm^2.

Work out the height of the cuboid.

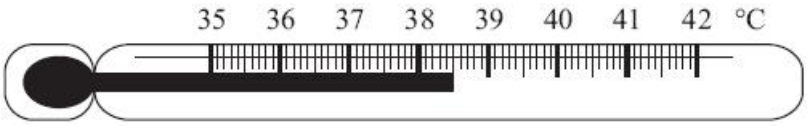
. . . . . cm

(Total for Question is 4 marks)

Q21.

Mason is ill.

The diagram shows Mason's body temperature, in °C, on a thermometer.



Normal body temperature is 36.8 °C.

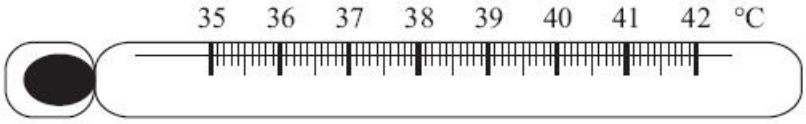
(a) Work out the difference between Mason's body temperature and normal body temperature.

. . . . . °C

(2)

Mason's body temperature drops by 1.2 °C.

(b) Show Mason's new body temperature on the thermometer below.



(1)

(Total for Question is 3 marks)

Q22.

Work out 1.83 × 47

.....

(Total for Question is 3 marks)

Q23.

(a) Work out 56 × 1000

.....

(1)

(b) Work out 600 − 324

.....

(1)

(c) Work out ¼ of 24 kg

..... kg

(1)

(d) Work out 4 × 5 + 9

.....

(1)

(e) Work out 18 − 10 ÷ 2

.....

(1)

(Total for Question is 5 marks)

Q24.

Here is part of a train timetable from Newcastle to London.

Newcastle	05 56	06 30	07 28
Durham	06 09	06 42	07 41
Darlington	06 28	07 00	07 59
York	06 56	07 33	08 27
Peterborough	08 11	08 41	09 48
London	09 08	09 39	10 45

A train leaves Newcastle at 05 56

(a) What time should this train get to London?

.....

(1)

Matthew gets to the station in Darlington at 06 45
He wants to catch the next train to York.

(b) How many minutes should he have to wait for this train?

.....minutes

(1)

A train leaves Peterborough at 09 48

(c) How many minutes should this train take to get from Peterborough to London?

.....minutes

(1)

(Total for Question is 3 marks)

Mark Scheme

Q1.

Question	Answer	Mark	Mark scheme	Additional guidance
	70 or 7 tens	B1	for 70 (or seventy) or 7 tens (or seven tens)	Condone any incorrect spelling provided the intention is clear

Q2.

Question	Answer	Mark	Mark scheme	Additional guidance
	3	B1	cao	

Q3.

Paper 1MA1: 1F			
Question	**Working**	**Answer**	**Notes**
		5.3(0)	B1 cao

Q4.

Question	Answer	Mark	Mark scheme	Additional guidance
	0.309, 0.32, 0.35, 0.4	B1	for 0.309, 0.32, 0.35, 0.4	Accept written in reverse order: 0.4, 0.35, 0.32, 0.309

Q5.

Question	Answer	Mark	Mark scheme	Additional guidance
	–10, –7, –2, 0, 1, 8	B1	Accept the reverse order, eg 8, 1, 0, –2, –7, –10	

Q6.

Question	Answer	Mark	Mark scheme	Additional guidance
	4	B1	cao	

Q7.

Question	Answer	Mark	Mark scheme	Additional guidance
	10 or 12	B1	for 10 or 12	Accept both 10 and 12 given

Q8.

Question	Working	Answer	Mark	Notes
		$\frac{9}{100}$	B1	

Q9.

Question	Answer	Mark	Mark scheme	Additional guidance
	–0.5, 1	M1	for one correct coordinate **or** midpoint shown on diagram **or** correct method, eg $\frac{-3+2}{2}$ or $\frac{-2+4}{2}$ **or** for the coordinates reversed, eg 1, – 0.5	
		A1	for –0.5, 1 oe	

Q10.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	Example	C1	for a correct example, eg $3 \times 4 = 12$ or $12 \div 3 = 4$ **or** a statement eg '3 is a factor of 12' or '1 is a factor of every number'	This may be seen, for example, in a factor tree or in a list of factors, but there must be no incorrect factors on the tree or in the list
(b)	Example	C1	for an example, eg 23 **or** a statement eg. 'the tens digit may be even' or 'the last digit only needs to be odd'	

Q11.

Paper 1MA1: 1F			
Question	**Working**	**Answer**	**Notes**
		7.50	M1 $60 \div 8$ A1 accept 7.5

Q12.

Question		Working	Answer	Mark	Notes
			(P, B), (P, S), (P, L) (M, B), (M, S), (M, L) (H, B), (H, S), (H, L)	2	M1 for any 3 combinations with no incorrect combinations A1 for all 9 combinations with no duplicates or extras

Q13.

Question	Working	Answer	Mark	Notes
		$\frac{7}{17}$	M1 A1	for $\frac{a}{17}$ where $a \neq 7$ but < 17 or $\frac{7}{b}$ where $b \neq 17$ but > 7 oe

Q14.

5MB2F/01 June 2015				
Question	**Working**	**Answer**	**Mark**	**Notes**
		80, 75 reason	2	B1 cao B1 for correct reason, e.g. take 5 (each time)

Q15.

Question		Working	Answer	Mark	Notes
	(i)		64	2	B1 cao
	(ii)		Vertically opposite angles		B1 for 'vertically **opposite angles**' or '**vertically opposite** angles'

Q16.

		Working	Answer	Mark	Notes
	(a)		7	1	B1 for 7 or – 7
	(b)		27	1	B1 cao

Q17.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{1}{4}, \frac{1}{3}, \frac{1}{2}, \frac{7}{12}, \frac{3}{4}$	M1	converts fractions to a common equivalent form, at least two conversions correct eg fractions with a denominator of 12, decimals or percentages, **or** any 4 fractions in correct order	0.25, 0.33(…), 0.5, 0.58(…), 0.75
		A1	cao	Accept list in reverse order for this mark Accept expressed in equivalent decimals or percentages or any other appropriate from or mixed forms

Q18.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	14	B1	for 14	
(b)	Explanation	C1	for explanation **Acceptable examples** she divided by 2 but should have multiplied by 2 there are 96 halves in 48 $48 \times 2 = 96$ **Not acceptable examples** $24 \times 2 = 48$	

Q19.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$\frac{7}{15}$	M1	for suitable common denominator with at least one fraction out of two correct, eg $\frac{10}{15} - \frac{3}{15}$ oe	
		A1	oe	
(b)	$\frac{1}{2}$	M1	for method to multiply fractions, eg $\frac{2\times3}{3\times4}$, $\frac{8\times9}{12\times12}$ or to simplify, $\frac{1}{3}\times\frac{3}{2}$ or $\frac{2}{1}\times\frac{1}{4}$ **OR** for an answer equivalent to $\frac{1}{2}$ (unsimplified) eg $\frac{2}{4}$, 0.5	
		A1	cao	

Q20.

Question	Working	Answer	Mark	Notes
	Bottom / top is 5 × 10 = 50; 50 × 2 = 100; 280 – 100 = 180 Other dimensions: 10 + 10 + 5 + 5 = 30; 180 ÷ 30 =	6	4	M1 recognition that the bottom/top is 5 × 10 (= 50), 50 seen M1 for 280 – 2 × "50" (= 180) M1 for "180" ÷ "other dimensions" or valid attempt to find height using these dimensions A1 cao

Q21.

Question		Working	Answer	Mark	Notes
	(a)	38.5 – 36.8 OR Counting on the scale from '38.5' to 36.8	1.7	2	M1 for 38.5 A1 for 1.7
	(b)		Temp. at 37.3	1	B1 for temp shown at 37.3 ± 0.1

Q22.

		Working	Answer	Mark	Notes
		183 × 47 1281 7320 8601 4000 + 3200 +120 + 700 + 560 + 21 = 8601	86.01	3	M1 for a complete method to multiply 183 by 47 (condone one multiplication error) A1 for digits 8601 given as the answer B1 (dep on M1) for correctly writing their answer to 2 decimal places

	1	8	3	×
	4	3 2	1 2	4
8	7	5 6	2 1	7
	6	0	1	

100	80	3	
4000	3200	120	40
700	560	21	7

Q23.

PAPER: 1MA0_1F					
	Question	Working	Answer	Mark	Notes
	(a)		56 000	1	B1 cao
	(b)		276	1	B1 cao
	(c)		6	1	B1 cao
	(d)		29	1	B1 cao
	(e)		13	1	B1 cao

Q24.

PAPER: 1MA0_1F					
	Question	Working	Answer	Mark	Notes
	(a)		0908	1	B1 cao
	(b)		15	1	B1 cao
	(c)		57	1	B1 cao