Name:

OUNDLE
School

SCAN ME

2019 Junior Entrance Examination
First Form Entry

Mathematics

Time Allowed: 60 minutes

Instructions

- Attempt all questions.
- All working and answers must be shown on this paper. Marks will be given for demonstrating your method.
- Calculators are ***not*** permitted.

Question 1

(a) Sally bought two Lego sets with her Christmas money.
One cost £36.97 and the other cost £47.76.
How much did she spend in total on these two Lego sets?

Answer ..... [2]

(b) At the end of 2017 Michael had £3 487.56 in his bank account.
At the end of 2018 he had £2 678.81.
Calculate the difference between these amounts.

Answer ..... [2]

(c) A model of calculator has 49 buttons.
The manufacturer of the calculators wants to produce 3480 calculators.
How many buttons will be needed?

Answer ..... [2]

(d) A medicine manufacturer usually sells flu vaccines for £9.80 each.
The NHS negotiates a discount and buys 5 000 vaccines for £38 000.
How much does the NHS pay for one vaccine?

Answer ..... [3]

Question 2 Work out the following, obeying the correct order of operations.

(a) $-5 + (-5)$

Answer ..... [1]

(b) 3×0

Answer ..... [1]

(c) $10 - 9 \times 0$

Answer ..... [1]

(d) $6 + 4 \div 2$

Answer ..... [1]

(e) $-1 \times 5 - 3 \times 2$

Answer ..... [1]

(f) $7 - 7 - 7 \div 7$

Answer ..... [1]

Question 3

Insert brackets to make the following statements correct:

(a) $9 \times 5 \div 2 + 1 = 15$

(b) $3 \times 7 - 6 \times 4 - 3 = 15$

[2]

Question 4
A pile of coal can heat 12 houses for 8 days.
For how many days could the same pile of coal heat 16 similar houses?

Answer …… [2]

Question 5
On Black Friday an iPhone cost £750.
Now it costs £900.
What percentage increase does this represent?

Answer …… [2]

Question 6
x and y are two *different, positive* whole numbers which make the following statement true

$$3x + 5y = 75$$

Find two possible pairs of numbers which make the statement above true.

First pair x = …… y = ……

Second pair x = …… y = ……
[2]

Question 7

In 1st form the ratio of girls to boys is 7:9
There are 16 more boys than girls in 1st form.
How many pupils are there in 1st form?

Answer …….. [2]

Question 8

Given that $23 \times 15 = 345$, write down the missing number in each part.

(a) $23 \times ? = 3\,450$

Answer ..... [1]

(b) $2.3 \times ? = 34\,500$

Answer ..... [1]

(c) $34.5 \div ? = 1\,500$

Answer ..... [2]

Question 9

In this question you may use the grid below to help you answer the questions.

A straight line passes through the points (2, 0) and (7, 10).

(a) (i) The point (3, a) also lies on the line. Work out the value of a.

Answer ..... [1]

(ii) The point (b, 8) also lies on the line. Work out the value of b.

Answer ..... [1]

(b) A triangle is formed by the points (2, 0), (4, 4) and (12, 0).
Calculate the area of this triangle.

Answer ..... [2]

Question 10

You have the numbers −3, 4, 2 and –9 available.
Any of these numbers can be used in each part of the question.

(a) What is the greatest number that can be obtained by adding two of the above numbers?

Answer: ..... [1]

(b) What is the least number that can be obtained by adding two of the above numbers?

Answer: ..... [1]

(c) What is the greatest number that can be obtained by subtracting two of the above numbers?

Answer: ..... [1]

(d) What is the least number that can be obtained by multiplying two of the above numbers?

Answer: ..... [1]

Question 11

This question is about fractions.

(a) Which fraction is bigger, four sevenths or five ninths?

Answer ..... [1]

(b) Write down a fraction which is greater than three fifths, but less than four fifths.

Answer ..... [1]

(c) Write down a fraction which is less than one seventh, but greater than one eighth.

Answer ..... [1]

(d) Calculate half of one sixth.

Answer ..... [1]

(e) What is the result if one is subtracted from two ninths?

Answer ..... [1]