



Name:



OUNDLE

School

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 $x = \dots\dots\dots$ $y = \dots\dots\dots$

Second pair $x = \dots\dots\dots$ $y = \dots\dots\dots$

[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 .

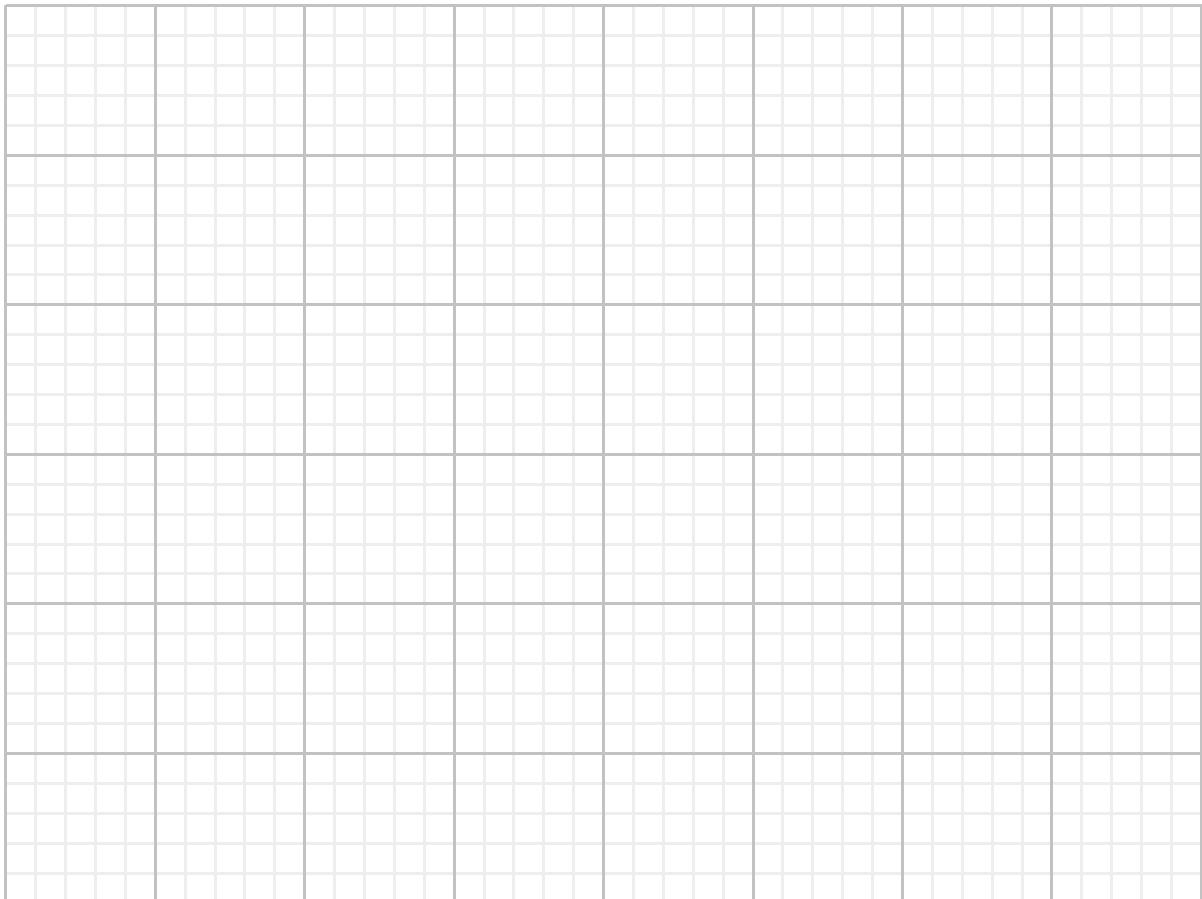
Answer [1]

(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]