

Name:



OUNDLE

School

2020 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) Jeremy bought two books with his Christmas money.
One cost £11.97 and the other cost £29.87.
How much did he spend in total on these two books?

Answer [2]

- (b) At the end of 2018 Sally had £2 387.56 in her bank account.
At the end of 2019 she had £1 678.81.
Calculate the difference between these amounts.

Answer [2]

- (c) A model of laptop computer has 87 keys on the keyboard.
The manufacturer wants to produce 340 of these computers.
How many keys will the computers have in total?

Answer [2]

- (d) A finance company sells car insurance policies to individuals for £330.
A car rental company negotiates a discount for buying lots of policies.
They purchase 17 000 policies for £4 590 000.
How much did they pay per policy?

Answer [3]

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

(a) $-3 + (-3)$

Answer [1]

(b) 1×0

Answer [1]

(c) $15 - 14 \times 0$

Answer [1]

(d) $7 + 5 \div 2$

Answer [1]

(e) $-1 \times 7 - 5 \times 2$

Answer [1]

(f) $6 - 6 - 6 \div 6$

Answer [1]

Question 3

Insert brackets to make the following statements correct:

(a) $9 \times 8 \div 1 + 5 = 12$

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

[2]

Question 4

A pile of food can feed 12 horses for 12 days.
For how many days could the same pile of food feed 48 horses?

Answer [2]

Question 5

On Black Friday a book cost £7.20.
Now it costs £8.10
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 boys are there in 1st form?

Answer [2]

Question 8

Given that $17 \times 12 = 3\,468$, write down the missing number in each part.

(a) $17 \times ? = 3\,468$

Answer [1]

(b) $1.7 \times ? = 346\,800$

Answer [1]

(c) $34.68 \div ? = 1\,700$

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 (4, 3) and (8, 15).

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

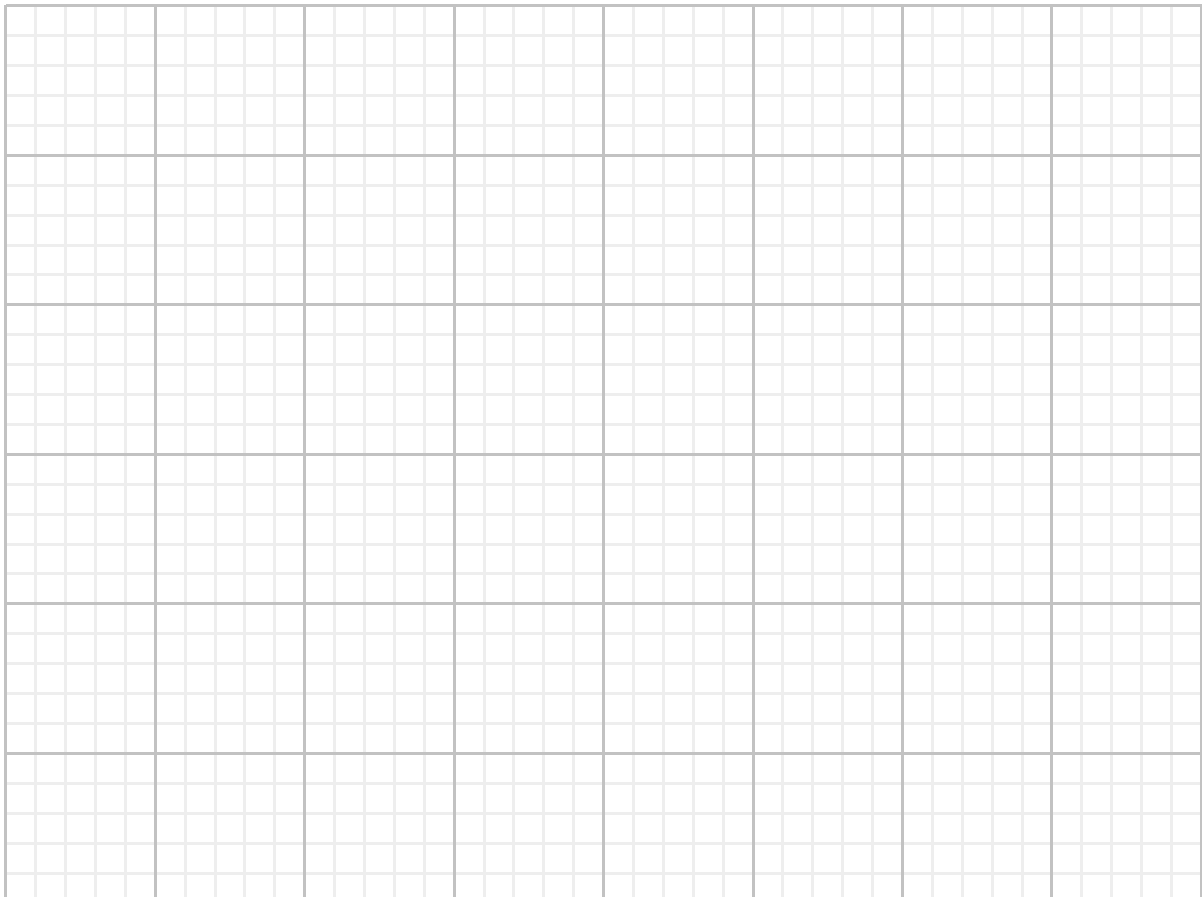
Answer [1]

(ii) The point (b , 18) also lies on the line. Work out the value of b .

Answer [1]

(b) A triangle is formed by the points (2, 0), (4, 6) and (9, 0).
Calculate the area of this triangle.

Answer [2]



Question 10

You have the numbers -5 , 5 , 3 and -8 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, five sixths or six sevenths?

Answer [1]

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

Answer [1]

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

Answer [1]

- (d) Calculate a third of one sixth.

Answer [1]

- (e) What is the result if one is subtracted from three sevenths?

Answer [1]