

## Year 8 Autumn Assessment Mathematics

Name

Date

### Time allowed 55 minutes.

The maximum mark for this paper is 50.

#### Instructions

- Use black ink or black ball-point pen.
- No calculator allowed.
- Protractor required.
- Draw diagrams in pencil.
- Tracing paper is allowed.
- Answer all questions.
- You must answer the questions in the spaces provided.
- Do all rough work in this booklet.
- Cross through any work you do not want to be marked.
- You must keep working until the end of the 55 minutes.

#### Information

• The results of this assessment will be reported back to parents/carers.



# Test Analysis

Question		My Mark	Max Mark	Hegarty
1	Equivalent Fractions and Percentages		1	75
2	Collecting like terms		1	156
3	Understanding rounding		1	17
4	Equivalent Ratio		1	329
5	Mixed Number to Improper Fraction		1	64
6	Using and interpreting a frequency diagram		4	425
7	Negative Number Arithmetic		6	39, 40
8	Ratio Problem		2	332
9	Finding a missing angle on a straight line		2	477
10	Area and Ratio Problem		2	554
11	Plotting coordinates and types of triangles		2	199
12	Angles in a Triangle and Proportional Reasoning		2	485
13	Fraction arithmetic		5	66
14	Mean and Mode of a set of values		3	405/404
15	Lines of Symmetry		3	827
16	Sharing in a given ratio		4	333
17	Pie Charts and Proportional Reasoning		3	428
18	Solving a "part given" ratio problem		3	335
19	Angles in Parallel Lines Problem		4	483

1	What is $\frac{1}{5}$ as a perce	entage?			
	Circle your answer				
	1.5%	5%	15%	20%	[1]
					[.]
2	Simplify $7x + 5 + 8$	+ 3 <i>x</i>			
	Circle your answer				
	23 <i>x</i>	10x + 13	4x + 13	10x + 3	[1]
3	x = 2500 when rour	nded to the nearest 10	0		
	Circle the smallest p	possible value of <i>x</i>			
	2449	2450	2495	2499	[1]
4	Circle the ratio equiv	valent 2:5			
	6.9	5.2	6.15	1.2	
	0.0	5.2	0.15	1.5	[1]
5	Which improper frac Circle your answer	ction is equivalent to 2	$\frac{3}{5}$ ?		
	$\frac{13}{5}$	<u>6</u>	$\frac{13}{10}$	8	
	Э	Э	10	10	[1]

6 The line graph shows the number of goals scored by a hockey team.



Here is a list of numbers:



\_\_ + \_\_\_\_ + \_\_\_\_

=



Answer \_\_\_\_\_

A square of area 64 cm<sup>2</sup> is cut to make two rectangles, A and B.



The ratio of area A to area B is 3:1

Work out the dimensions of rectangles A and B.

 Rectangle A:
 cm by \_\_\_\_\_ cm

 Rectangle B:
 cm by \_\_\_\_\_ cm

#### **11** Here is a centimetre squared grid.



Plot the three vertices of triangle ABC.

A (-3,-3), B (3,-3) and C (0,5)

What kind of triangle is ABC?

Answer \_\_\_\_\_

**12** The angles in triangle A are in the ratio 1 : 2 : 3

The angles in triangle B are in the ratio 4:5:6



Janees says

"The middle number in each ratio is one third of the total so one of the angles in each triangle is 60°"

Is she correct?

Show your working to support your answer.

**13 (a)** Work out 
$$\frac{1}{3} \times \frac{1}{4}$$
 [1]  
Answer \_\_\_\_\_

**13 (b)** What fraction is half way between 
$$\frac{1}{4}$$
 and  $\frac{1}{2}$ ?

$$2\frac{1}{3} + 1\frac{3}{4}$$

Give your answer as a mixed number.

Answer \_\_\_\_\_

[3]

14 Here are four cards with numbers on.



Simon thinks that the mode of the cards is higher than the mean.

Clare thinks the mean of the cards is higher than the mode.

Who is correct? Show working to support your answer.

Answer\_\_\_\_\_

[3]

**15** When you fold a **square** along a diagonal, you see a triangle.



(a) What do you see when you fold a **rectangle** along a diagonal?



Ring the correct answer below.









[1]

(b) Two different shapes are folded along a line of symmetry.

For each shape, the **dashed line** is the **fold line**.

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For each shape, draw what the shape looked like **before** it was folded.

16 A box contains 192 pens.

They are red, green or blue.

A quarter of the pens are red.

Green pens : Blue pens = 1:8

How many blue pens are there?



[4]

17 The pie chart shows information about the number of students attending four colleges.



(a) Use a protractor to measure the angle in the College D sector

	Answer	[1]
(b)	1200 students attend College D.	
	Altogether, how many students attend all the colleges	
	Answer	[2]

Jake, Kim and Lee share some money in the ratio 2:3:7Kim gets £8 more than Jake.

How much does Lee get?

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**19** Look at the diagram, made from four straight lines.

The lines marked with arrows are parallel.



Work out the sizes of the angles marked with letters.



END OF TEST