Name	Class

⚜ MATHS TEACHER HUB

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Fractions

(9 – 1) Topic booklet

Higher

These questions have been collated from previous years GCSE Mathematics papers.

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

Instructions
- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need*.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a **1H** question you are not allowed to use a calculator.
- If the question is a **2H** or a **3H** question, you may use a calculator to help you answer.

Information
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question*.

Advice
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Answer ALL questions
Write your answers in the space provided.
You must write down all the stages in your working.

1 (a) Work out $2\frac{1}{7} + 1\frac{1}{4}$

....

(2)

(b) Work out $1\frac{1}{5} \div \frac{3}{4}$

Give your answer as a mixed number in its simplest form.

....

(2)

(Total for Question 1 is 4 marks)

2 (a) Work out $3\frac{4}{5} - 1\frac{2}{3}$

....

(2)

Kevin was asked to work out $2\frac{1}{3} \times \frac{5}{8}$

Here is his working and his answer.

$$2\frac{1}{3} \times \frac{5}{8} = \frac{7}{3} \times \frac{5}{8}$$

$$= \frac{35}{24}$$

$$= 1\frac{9}{24}$$

Kevin's answer is wrong.

(b) What mistake has Kevin made?

....

....

....

(1)

(Total for Question 2 is 3 marks)

2 Show that $2\frac{1}{3} \times 3\frac{3}{4} = 8\frac{3}{4}$

(Total for Question 2 is 3 marks)

2 (a) Work out $1\frac{3}{5} + 2\frac{1}{4}$

Give your answer as a mixed number.

....

(2)

(b) Show that $2\frac{2}{3} \div 6 = \frac{4}{9}$

(2)

(Total for Question 2 is 4 marks)

2 Work out $7\frac{3}{8} - 2\frac{1}{2}$

Give your answer as a mixed number.

....

(Total for Question 2 is 3 marks)

3 Work out $4\frac{1}{5} - 2\frac{2}{3}$

Give your answer as a mixed number.

....

(Total for Question 3 is 3 marks)

3 The table shows some information about the dress sizes of 25 women.

Dress size	Number of women
8	2
10	9
12	8
14	6

(a) Find the median dress size.

....

(1)

3 of the 25 women have a shoe size of 7

Zoe says that if you choose at random one of the 25 women, the probability that she has either a shoe size of 7 or a dress size of 14 is $\dfrac{9}{25}$ because

$$\dfrac{3}{25} + \dfrac{6}{25} = \dfrac{9}{25}$$

(b) Is Zoe correct?
You must give a reason for your answer.

....

....

(1)

(Total for Question 3 is 2 marks)

6 (a) Work out $\quad 2\dfrac{1}{4} \times 3\dfrac{1}{3}$

Give your answer as a mixed number in its simplest form.

....

(3)

(b) Write the numbers 3, 4, 5 and 6 in the boxes to give the greatest possible total.
You may write each number only once.

$$\boxed{}\dfrac{1}{\boxed{}} + \boxed{}\dfrac{2}{\boxed{}}$$

(1)

(Total for Question 6 is 4 marks)

9 Work out $3\frac{1}{2} \times 1\frac{3}{5}$

Give your answer as a mixed number in its simplest form.

....

(Total for Question 9 is 3 marks)