

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 **1F** question you are not allowed to use a calculator.
- If the question is a **2F** or a **3F** 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)

2 Show that

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

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)

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

Give your answer as a mixed number.

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 $\frac{9}{25}$ because

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

(b) Is Zoe correct?

You must give a reason for your answer.

.....
.....
(1)

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

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.

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

(1)

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

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