

Name

Class



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# Direct and indirect proportion

(9 – 1) Topic booklet

## Foundation

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.**

**8** 3 kg of meat costs £54  
Nina buys 2 kg of the meat.  
Work out how much Nina pays.

£ .....

May 2018 – Paper 1F

**(Total for Question 8 is 2 marks)**

**8** 8 identical pens cost £12  
Work out the cost of 10 of these pens.

£ .....

Specimen 2 – Paper 1F

**(Total for Question 8 is 2 marks)**

**12** 2.5 kg of apples cost £3.60



Work out the cost of 3.5 kg of apples.

£.....

November 2017 – Paper 3F

**(Total for Question 12 is 2 marks)**

**12** Ibrar buys 3kg of apples.



He also buys 0.4kg of mushrooms.

The total cost is £6.93

1 kg of apples cost £1.95

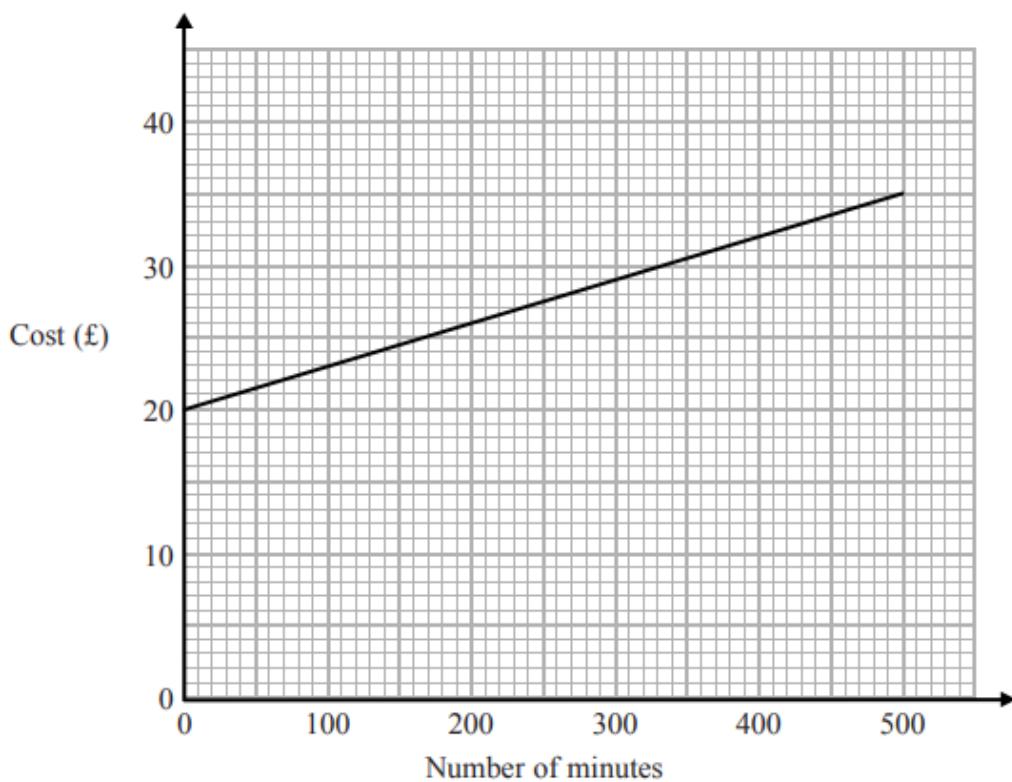
Work out the cost of 1 kg of mushrooms.

£.....

Specimen 2 – Paper 3F

**(Total for Question 12 is 3 marks)**

14 The graph shows the cost of using a mobile phone for one month for different numbers of minutes of calls made.



The cost includes a fixed rental charge of £20 and a charge for each minute of calls made.

Work out the charge for each minute of calls made.

**14** The total weight of 3 tins of beans and 4 jars of jam is 2080 g.  
The total weight of 5 tins of beans is 2000 g.

Work out the weight of 1 tin of beans and the weight of 1 jar of jam.



tin of beans..... g

jar of jam..... g

Sample 1 – Paper 3F

**(Total for Question 14 is 4 marks)**

17 5 tins of soup have a total weight of 1750 grams.

4 tins of soup and 3 packets of soup have a total weight of 1490 grams.

Work out the total weight of 3 tins of soup and 2 packets of soup.

..... grams

**25** A company orders a large number of plates from a factory.

It would take 30 hours to make all the plates using 4 machines.

How many machines are needed to make all the plates in 6 hours?

