

# GCSE Mathematics

## Practice Tests: Set 1A

### Paper 3F (Calculator)

**Time: 45 minutes**

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

#### 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.*
- **Calculators may be used.**
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**



#### Information

- The total mark for this paper is 40
- 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 spaces provided.**

**You must write down all the stages in your working.**

- 1.** Write 17 653 correct to the nearest 1000

.....

**(Total 1 mark)**

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- 2.** Here is a list of numbers.

**2**

**4**

**5**

**6**

**7**

**8**

From the list of numbers write down

(i) an odd number

(ii) a square number

(iii) a multiple of 3

(iv) a factor of 10

.....

.....

.....

.....

**(Total 4 marks)**

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3. A television programme started at 17 55  
The programme was 1 hour 20 minutes long.

(i) At what time did the programme end?

.....

Mumtaz started to watch this programme at 18 34

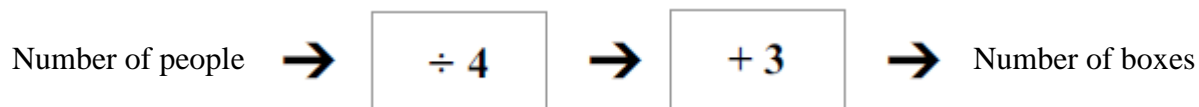
(ii) How many minutes of the programme did Mumtaz miss?

..... minutes

**(Total 3 marks)**

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4. John works out the number of boxes of orange juice he will need for a party.  
He uses this number machine.

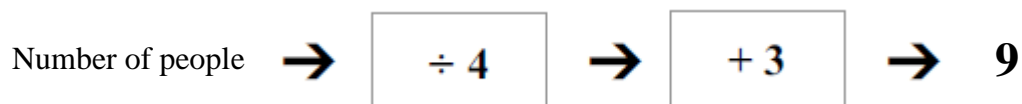


There will be 40 people at the party.

- (a) Work out the number of boxes of orange juice John needs.

.....  
(2)

For a different party John needs 9 boxes of orange juice.



- (b) Work out the number of people at the party.

.....  
(3)

**(Total 5 marks)**

5. Alan's wages are £240 each week.

He wants to save some money to buy a television.

The television costs £216

Alan is going to save 10% of his wages each week.

How many weeks will it take Alan to save enough money to buy the television?

.....  
(Total 4 marks)

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6. Peter goes for a walk.  
He walks 15 miles in 6 hours.
- (a) Work out Peter's average speed.  
Give your answer in miles per hour.

..... mph  
(2)

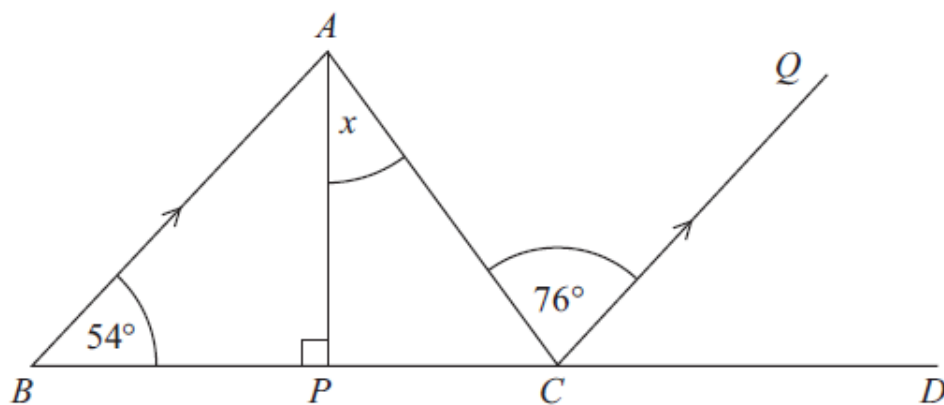
5 miles = 8 km.  
Sunita says that Peter walked more than 20 km.

- (b) Is Sunita right?  
You must show all your working.

(2)

(Total 4 marks)

7.



$BPCD$  is a straight line.

$BA$  is parallel to  $CQ$ .

$AP$  is perpendicular to  $BC$ .

Angle  $ABC = 54^\circ$

Angle  $ACQ = 76^\circ$

Work out the size of the angle marked  $x$ .

Give reasons for your answer.

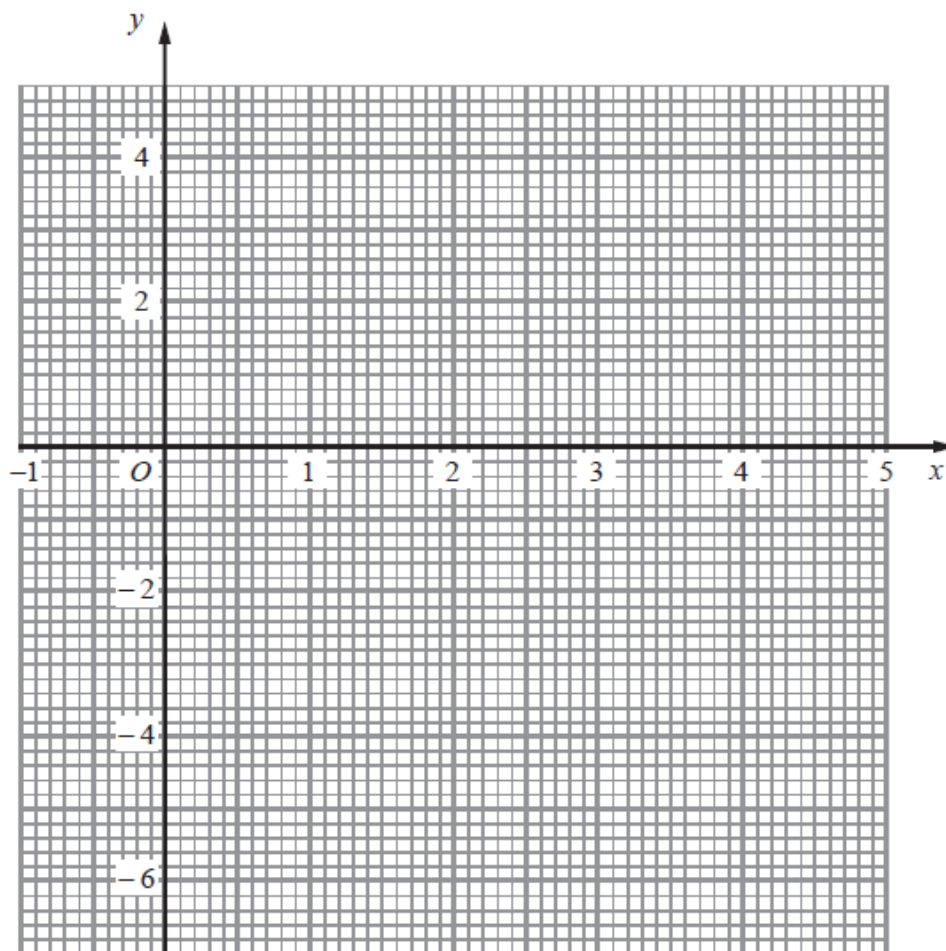
**(Total 4 marks)**

8. (a) Complete the table of values for  $y = x^2 - 4x - 2$

$x$	-1	0	1	2	3	4	5
$y$		-2	-5			-2	3

(2)

- (b) On the grid, draw the graph of  $y = y = x^2 - 4x - 2$



(2)

- (c) Use your graph to estimate the values of  $x$  when  $y = -3$

$x = \dots\dots\dots$

$x = \dots\dots\dots$

(2)

(Total 6 marks)



9. There are only red beads and green beads in a bag.  
The ratio of the number of red beads to the number of green beads is 5 : 9

(a) What fraction of the beads are red?

.....  
(1)

There is a total of 84 beads in the bag.

(b) How many of the beads are green?

.....  
(3)

Susie is going to put some more beads in the bag.  
There will still be only red beads and green beads in the bag.

Susie wants to have twice as many green beads as red beads in the bag.

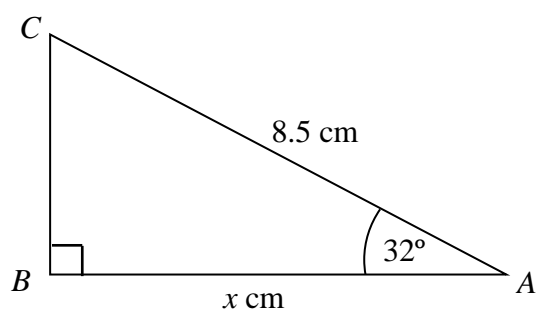
(c) What beads should she put in the bag?  
You must explain your answer.

(3)

**(Total 7 marks)**

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10.  $ABC$  is a right-angled triangle.



Work out the value of  $x$ .

Give your answer correct to 1 decimal place.

.....<sup>o</sup>

(Total 2 marks)

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**TOTAL FOR PAPER IS 40 MARKS**