Candidate surname	Other names
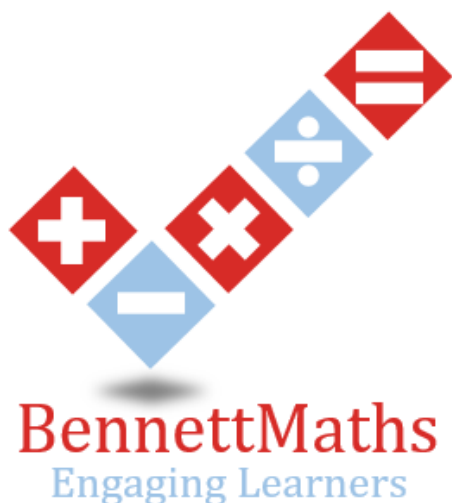
Best Guess Paper – Non-Calculator Foundation Tier

BennettMaths
Engaging Learners

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

Information

- The total mark for this paper is 79.
- 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.

Q1.

Find 10% of £320

£ ....

(Total for question = 1 mark)

Q2.

Change 53 centimetres to millimetres.

.... millimetres

(Total for question = 1 mark)

Q3.

Write down the value of the 7 in the number 8765

....

(Total for question = 1 mark)

Q4.

Work out $\frac{1}{8}$ of 720

....

(Total for question = 1 mark)

Q5.

(a) Simplify $5f - f + 2f$

....

                                                   (1)

(b) Simplify $2 \times m \times n \times 8$

....

                                                   (1)

(c) Simplify $t^2 + t^2$

....

                                                   (1)

(Total for question is 3 marks)

Q6.

(a) Write $\dfrac{1}{4}$ as a decimal.

....

                                                   (1)

(b) Write 0.15 as a fraction.

....

                                                   (1)

(c) Write 17 out of 40 as a fraction.

....

                                                   (1)

(Total for question = 3 marks)

Q7.

(a) Work out   +8 − 6

....

(1)

(b) Work out   −5 − 4

....

(1)

(c) Work out   −12 ÷ +4

....

(1)

(Total for Question is 3 marks)

Q8.

Sue has 2 cats.

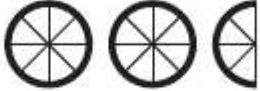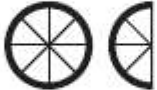Each cat eats $\frac{1}{4}$ of a tin of cat food each day.

Sue buys 8 tins of cat food.

Has Sue bought enough cat food to feed her 2 cats for 14 days?
You must show how you get your answer.

(Total for question = 3 marks)

Q9.

The incomplete pictogram shows information about the number of cycles sold in a shop on Tuesday, on Wednesday and on Thursday.

Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Key:

A total of 20 cycles were sold on Tuesday, Wednesday and Thursday.

8 cycles were sold on Friday.
15 cycles were sold on Saturday.

Use this information to complete the pictogram.

(Total for question = 3 marks)

Q10.

(a) Solve $x + x + x = 51$

$x =$ ....
(1)

(b) Solve $\dfrac{y}{4} = 3$

$y =$ ....
(1)

(c) Solve $2f + 7 = 18$

$f =$ ....
(1)

(Total for question = 3 marks)

Q11.
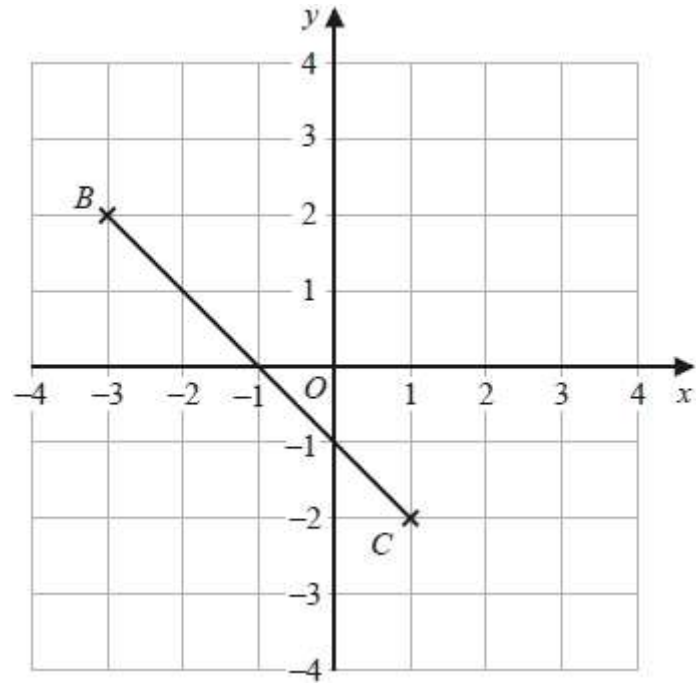
(a) Plot the point with coordinates (3, 2)

Label this point *A*.

(1)

(b) Write down the coordinates of the midpoint of *BC*.

(................ , ...)

(1)

(Total for question = 2 marks)

Q12.

Ali, Ben and Cathy share an amount of money in the ratio 6 : 9 : 10

What fraction of the money does Ben get?

....

(Total for question = 2 marks)

Q13.

Amber earns £7 for each hour she works from Monday to Friday.
She earns £10 for each hour she works on Saturday.

One week Amber worked for 4 hours on Saturday.
That week she earned a total of £180

(a) How many hours did Amber work that week?

.... hours

(3)

Chris works for 7 hours each day from Monday to Friday.
He earns *e* pounds for each hour he works.

(b) Write down an expression, in terms of *e*, for the total amount, in pounds, that Chris earns from Monday to Friday.

Give your answer in its simplest form.

....

(2)

(Total for question = 5 marks)

Q14.

Work out an estimate for $\dfrac{790 \times 289}{49}$

....

(Total for question = 3 marks)

Q15.

Here is a list of ingredients for making 16 flapjacks.

> **Ingredients for 16 flapjacks**
>
> 120 g butter
> 140 g brown sugar
> 250 g oats
> 2 tablespoons syrup

Jenny wants to make 24 flapjacks.

Work out how much of each of the ingredients she needs.

butter .... g

brown sugar .... g

oats .... g

syrup .... tablespoons

(Total for question = 3 marks)

Q16.

Natalie makes potato cakes in a restaurant.

She mixes potato, cheese and onion so that

weight of potato : weight of cheese : weight of onion = 9 : 2 : 1

Natalie needs to make 6000 g of potato cakes.

Cheese costs £2.25 for a 175 g packet.

Work out the cost of the cheese needed to make 6000 g of potato cakes.

£ ....

(Total for question = 4 marks)

Q17.

$v^2 = u^2 + 2as$

$u = 12 \quad a = -3 \quad s = 18$

(a) Work out a value of v.

....

(2)

(b) Make s the subject of $v^2 = u^2 + 2as$

....

(2)

(Total for question = 4 marks)

Q18.

(a) Factorise $y^2 + 27y$

....

(1)

(b) Simplify $(t^3)^2$

....

(1)

(c) Simplify $\dfrac{w^9}{w^4}$

....

(1)

(Total for question = 3 marks)

Q19.

Savio leaves his home at 07 30 to drive to work.

He drives a distance of 50 miles.

Savio thinks he drives at an average speed of 40 miles per hour.

(a) If Savio is correct, at what time will he arrive at work?

....

(3)

In fact, Savio's average speed was greater than 40 miles per hour.

(b) How does this affect your answer to part (a)?

....

....

....

(1)

(Total for question = 4 marks)

Q20.

(a) Work out $\dfrac{2}{7} + \dfrac{1}{5}$

....

(2)

(b) Work out $1\dfrac{2}{3} \div \dfrac{3}{4}$

....
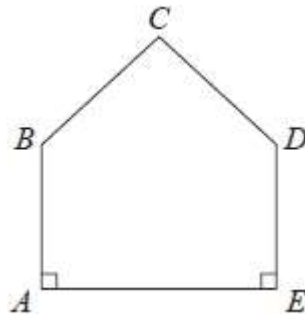
(2)

(Total for question = 4 marks)

Q21.
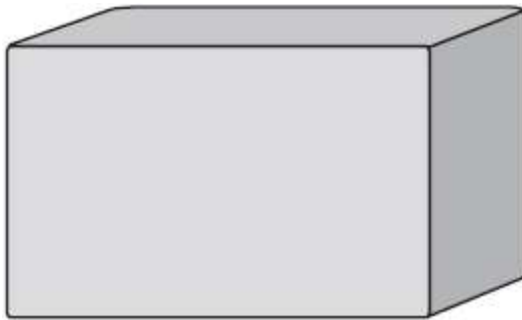
$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

A storage tank exerts a force of 10 000 newtons on the ground.

The base of the tank in contact with the ground is a 4m by 2m rectangle.

Work out the pressure on the ground due to the tank.

.... newtons / m^2

(Total for question = 2 marks)

Q22.

The diagram shows a pentagon.
The pentagon has one line of symmetry.

$AE = 4x$
$AB = 2x + 1$
$BC = x + 2$

All these measurements are given in centimetres.

The perimeter of the pentagon is 18 cm.

(a) Show that $10x + 6 = 18$

(3)

(b) Find the value of x.

$x =$ ....

(2)

(Total for question = 5 marks)

Q23.

Express 56 as the product of its prime factors.

....

(Total for question = 2 marks)

Q24.

Work out 6.34 × 5.2

....

(Total for question = 3 marks)

Q25.

A number, *d*, is rounded to 1 decimal place.
The result is 12.7

Complete the error interval for *d*.

.... ≤ *d* < ....

(Total for question = 2 marks)

Q26.

(a) (i) Write down the value of 5^0

....
(1)

(ii) Write down the value of 5^{-2}

....
(1)

(b) Write $\dfrac{2^5 \times 2^4}{2^3}$ in the form 2^n where n is an integer.

....
(2)

(Total for question = 4 marks)

Q27.

(a) Write down the exact value of $\cos 30°$

....
(1)

(b)
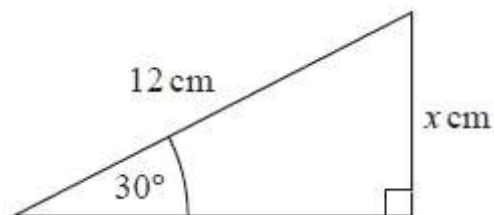
Given that $\sin 30° = 0.5$,
work out the value of x.

....
(2)

(Total for question is 3 marks)