Highfield EXAMINATION

Highfield Qualifications®

Paper Code: FSQC209P

MOCK Highfield Functional Skills Qualification in Mathematics at Level 2

Level 2

Information for centres and learners

- **Learners taking this examination must also complete papercode FSQN209P.**
- **Only remove the examination paper from the sealed envelope when instructed to do so.**
- **Under no circumstances should you use an unsealed examination paper.**
- Complete **ALL** questions.
- Use **BLACK** or **BLUE** ink.
- You are **NOT** allowed any assistance to complete the answers. You **MAY** however use a **CALCULATOR**.
- Marks are awarded for **SHOWING** your **WORKING OUT**.
- Use a **PENCIL**, **ERASER**, **RULER** and **PROTRACTOR** (as necessary) when drawing diagrams and charts.
- **SIGN** the declaration before leaving.

The duration of this examination is **1 HOUR 50 MINUTES**. The examination consists of **16 QUESTIONS** and is worth **53 MARKS**.

Complete the following

First Name *(in full)*

Middle initial

Last Name

Date of Birth *(8 digits)*

D D M M Y Y Y Y

Highfield Learner ID

Approved Centre Number *(5 digits)*

Nominated Tutor Number *(5 digits)*

Examination Date *(8 digits)*

D D M M Y Y Y Y

Is this a resit examination? YES NO

Examination Start Time *(24 hour clock)*

H H M M

Examination Finish Time *(24 hour clock)*

H H M M

Calculator Test

Learner declaration

I confirm:

- I removed the examination paper from the sealed envelope.
- I received no help in answering the questions in this examination paper.
- I am the person stated above on this form.
- I will not discuss the content of the examination with anyone else.

Learner signature: ....

We listen and respond

1

Calculate 23% of 591

Write the answer in the box below.   *(1 mark)*

Answer: _____

2

A survey asked 380 customers if they were satisfied with their current phone network provider.
Of those asked, 312 said yes.

What percentage of the customers said no?

Show your working and write the answer in the box below.   *(2 marks)*
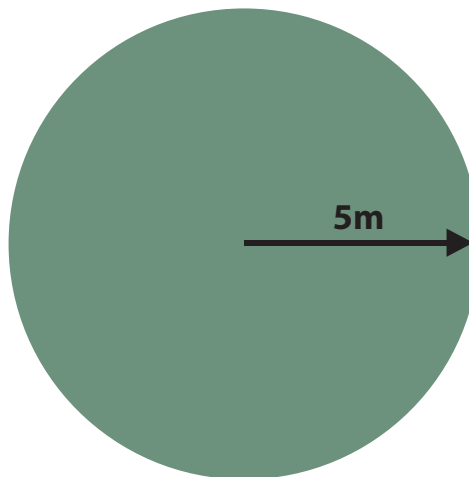
Answer: _____%

3

Show how you could check your answer to question 2.

Show your working out in the box below.   *(1 mark)*

4

Calculate the circumference (**C**) of this circle:

Diagram not drawn to scale

5m

Use π = 3.14

Show your working out and write the answer in the box below.   *(2 marks)*

Answer: _____

5

Calculate the median of the following set of numbers.

234   345   224   564   435   315   654   671

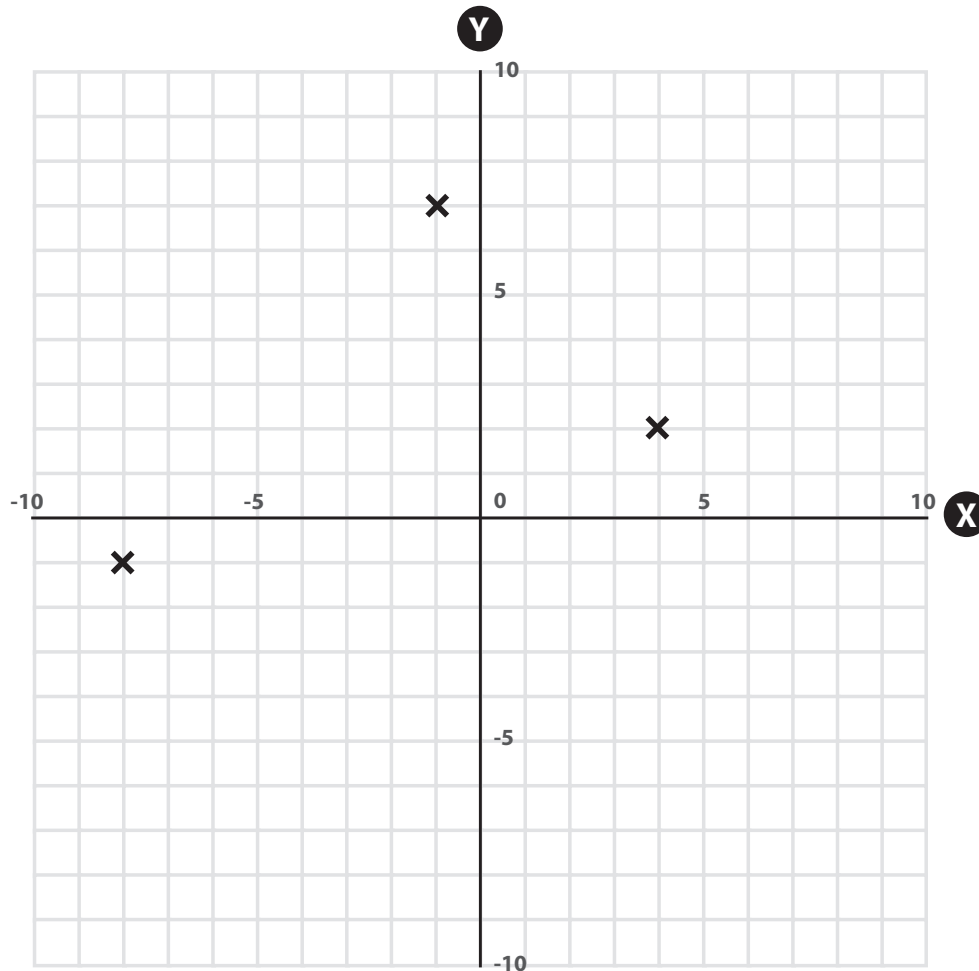Show your working out and write the answer in the box below.

(2 marks)

Answer: _____

QUESTIONS CONTINUE ON NEXT PAGE

6

Three corners of a **rectangle** are marked on the grid below:

What are the coordinates of the fourth corner?

Write the answer in the box below.   *(1 mark)*

Answer: _____

7

Calculate the value of n where:

n = 342 + 88² ÷ 4

Write the answer in the box below.

(1 mark)

Answer: _____

8

$$\text{Speed} = \frac{Distance}{Time}$$

Calculate the speed, when the distance is 15.8 miles and time is 2.4 hours. Round your answer to 2 decimal places.

Show your working out and write the answer in the box below.

(2 marks)

Answer: _____ mph

9

What is 18 out of 63 as a fraction? Simplify your answer.

Show your working out and write the answer in the box below.

(2 marks)

Answer: _____

Scenario A

You work for Highfield Bank.

10

This table shows the number of customers who use contactless payments.

a) Complete the table.

(2 marks)

	Use contactless payments	Do not use contactless payments	Total
Aged 30 years and under	951	446	1397
Aged over 30 years	337		
Total	**1288**		**1854**

b) A customer aged over 30 years was chosen at random.

What is the probability that the chosen customer uses contactless payments?

Give your answer as a percentage.

Show your working out and write the answer in the box below.

(3 marks)

Answer:_____%

11

The bank receives lots of telephone enquiries and your manager is looking at your call statistics.

The table below shows the number of calls you have answered today and the duration of each call:

Length of call	Frequency
Up to 10 minutes	6
More than 10 minutes to 20 minutes	8
More than 20 minutes to 30 minutes	2
More than 30 minutes to 40 minutes	15
More than 40 minutes to 50 minutes	9
More than 50 minutes to 60 minutes	4

Estimate the mean length of the calls you receive. Round your answer to the nearest whole minute.

Show your working out and write the answer in the box below.

(6 marks)

Answer:_____minutes

12

A customer wants to take out a personal loan of £1500. They will complete repayments at the end of 6 months (182 days).

The bank offers the following 3 options:

- Option A: At the end of the 6 months, pay back £1500 plus 8p per day for each £500 borrowed
- Options B: At the end of the 6 months, pay back £1500 plus 2.7% interest
- Option C: At the end of the 6 months, pay back £1500 plus a monthly repayment amount of 0.5% of the total amount borrowed

Which loan option is the cheapest?

Show your working out and write your answer in the box below.

(6 marks)

Answer: _____

13

Highfield Bank records the profit (£) made over the previous 2 years:

Quarter	2017	2018
1	900,000	950,000
2	750,000	850,000
3	550,000	600,000
4	550,000	850,000

What is the percentage increase in the mean quarterly profit from 2017 to 2018?

Show your working out and write the answer in the box below.   *(5 marks)*

Answer: _____ %

Scenario B

You work for Highfield Ground Maintenance.

14

The table below shows how much Highfield Ground Maintenance pays its staff:

Working Day	Rate
Monday to Friday	Hourly rate
Saturday	Hourly rate x 1¼
Sunday	Double Hourly rate

Last week you worked 7½ hours each day on Monday to Friday, 4 hours on Saturday and 3 hours on Sunday.

The hourly rate is £8.90.

Each week your employer deducts 20% to pay your tax.

How much did you earn last week, after tax?

Show your working out and write the answer in the box below.

(6 marks)

Answer: £ _____

15

You have a job to decorate a local roundabout with a pattern of flowers.
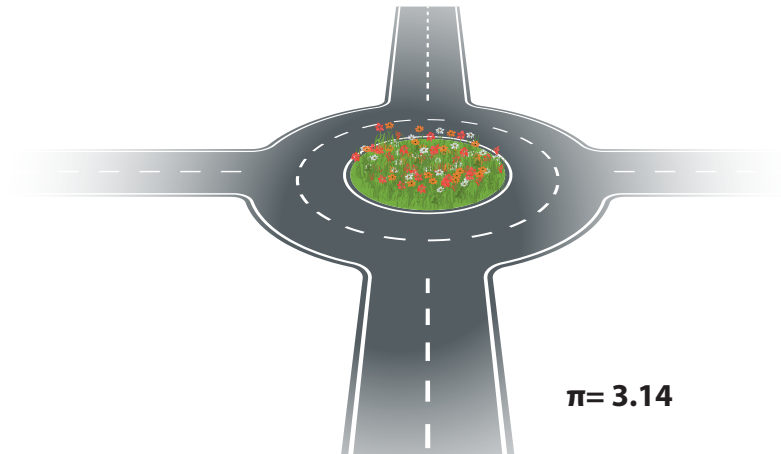
The roundabout is a circle with a radius of 5.5m

You have to completely fill the circular space with flowers.

You can plant 30 flowers per square metre of space.

You need 3 times as many red flowers as yellow flowers.

How many red flowers will you plant?

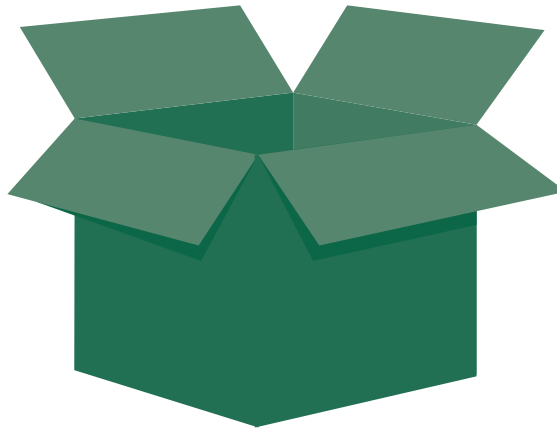Show your working out and write your answer in the box below.

π= 3.14

(5 marks)

Answer: _____

16

You manager has asked you to unload some boxes from a delivery and put them in the storage yard.

There are 3 different-sized boxes:

Box	Length	Width	Height	Weight
A	40cm	25cm	1m	2.9kg
B	35cm	30cm	0.8m	3.1kg
C	38cm	28cm	0.9m	2.6kg

a) Which box has the largest volume?

Show your working out and write your answer in the box below.   *(4 marks)*

Answer: _____

The delivery arrives on a pallet which contains 8 boxes (either A, B or C from the table above).

The pallet weighs 5kg.

For deliveries up to 30kg you use a trolley. For deliveries over 30kg you use a forklift.

b) Using the table above, will you use the trolley or the forklift to unload the delivery?

Show your working out and write your answer in the box below.   *(2 marks)*

Answer: _____

END OF TEST

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
Mark(s) available	1	2	1	2	2	1	1	2	2	5	6	6	5	6	5	6	53
Marker																	
Moderator																	

Marker:		Moderator:	
Date:		Date:	

Level 2
Mathematics

We listen and respond