

Question 1:

\*P75148A0424\*

4

4 The table shows information about the daily rainfall in a town for 60 days.

Rainfall (R mm) Frequency

0  $R < 5$  8

5

$R < 10$  24

10  $R < 15$  13

15  $R < 20$  11

20  $R < 25$  4

Draw a frequency polygon for this information.

0 5 10 15 20 25 30

20 10

0

Rainfall (R mm) Frequency

(Total for Question 4 is 2 marks)

Question 2:

\*P75148A01224\*

12

12 Martha plays a game twice.

The probability tree

diagram shows the probabilities that Martha will win or lose  
 each game.

win

win

losewinlose

lose1st game 2nd game

2

92

9

3

85

8

7

979

Find the probability that Martha will lose at least one game.

.....

(Total for Question 12 is 3 marks)

Question 3:

\*P75148A02224\*

22

24 Find the set of possible values of  $x$  for which

$4x^2 - 25 < 0$     and     $12 - 5x - 3x^2 > 0$

You must show all your working.

.....

(Total for Question 24 is 5 marks)

TOTAL FOR PAPER IS 80 MARKS

Question 4:

\*P75148A0924\* Turn over

9

9

5 5 10 15 O5

5

10

$152y = 3x \ 22$

$2 \ 2y = xxy$

Use these graphs to solve the simultaneous equations

$2 \ 2$

$y = x$

$2y = 3x \ 22$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(Total for Question 9 is 1 mark)

Question 5:

\*P75148A02324\*

23

Question 6:

\*P75148A0124\*

Turn over

P75148A

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N:1/1/1/1/1/Please check the examination details below before entering your candidate information

Candidate surname Other names

Centre Number Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (91)

Friday 19 May 2023

Morning (Time: 1 hour 30 minutes) 1MA1/1HPaperreference

Total Marks Mathematics

PAPER 1 (Non-Calculator)

Higher Tier

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, Formulae Sheet (enclosed). Tracing paper may be used.

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 80 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. Try to answer every question. Check

your answers if you have time at the end.

Question 7:

\*P75148A02024\*

20

22 ABCDEFGH is a cuboid.

A DG

BEH

CF

$AF = 6.8 \text{ cm}$

FC

$= 13.6 \text{ cm}$

Work out the size of the angle

between FC and the plane ABCD.

.....°

(Total for Question 22 is 2 marks)

Question 8:

\*P75148A02424\*

24

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Question 9:

\*P75148A01824\*

20 For  $x \geq 0$ , the functions  $f$  and  $g$  are such that

$$f(x) = 3x + 4 \quad g(x) = x + 2$$

5

(a) Find  $g(f(x))$

$$g(f(x)) = \dots\dots\dots$$

(2)

(b) Solve  $gf(x) = 3$

$$x = \dots\dots\dots$$

$$x = \dots\dots\dots$$

(3)

(Total for Question 20 is 5 marks)

Question 10:

\*P75148A0624\*

6

6 The scatter graph shows information about the ages and weights of some babies.

0 2 4 6 8 10 12 14

10

86420

Age (months) Weight

(kg)

(a) Describe the relationship between the age and the weight of the babies.

.....

.....

.....

.....

.....

.....

(1)

Another baby has a weight of 5.8 kg

(b) Using the scatter graph, find an estimate  
for the age of this baby.

..... months

(2)

(Total for Question 6 is 3 marks)