OCR
RECOGNISING ACHIEVEMENT

FREE-STANDING MATHEMATICS QUALIFICATION
INTERMEDIATE LEVEL

FOUNDATIONS OF ADVANCED MATHEMATICS 6989

Candidates answer on the Answer Sheet

OCR Supplied Materials:
- Answer Sheet (MS4)

Other Materials Required:
- Eraser
- Rough Paper
- Scientific calculator
- Soft pencil

Friday 5 June 2009
Morning

Duration: 2 hours

* 6 9 8 9 *

INSTRUCTIONS TO CANDIDATES

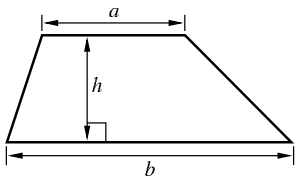
- Write your name clearly in capital letters, your Centre Number and Candidate Number on the Answer Sheet in the spaces provided unless this has already been done for you.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Do **not** write in the bar codes.
- There are **forty** questions in this paper. Attempt as many questions as possible. For each question there are four possible answers, **A**, **B**, **C** and **D**. Choose the **one** you consider correct and record your choice in **soft pencil** on the separate Answer Sheet.
- **Read very carefully the instructions on the Answer Sheet.**

INFORMATION FOR CANDIDATES

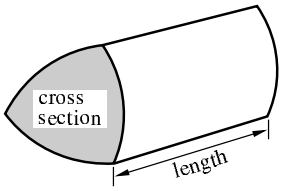
- Each correct answer will score one mark. A mark will not be deducted for a wrong answer.
- Paper is provided for rough work; this should not be handed in.
- This document consists of **20** pages. Any blank pages are indicated.

Formulae Sheet: 6989 Foundations of Advanced Mathematics

Area of trapezium $= \frac{1}{2}(a+b)h$



Volume of prism = (area of cross-section) × length

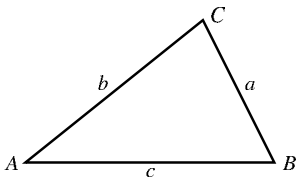


In any triangle ABC

Sine rule $\dfrac{a}{\sin A} = \dfrac{b}{\sin B} = \dfrac{c}{\sin C}$

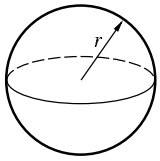
Cosine rule $a^2 = b^2 + c^2 - 2bc\cos A$

Area of triangle $= \frac{1}{2}ab\sin C$



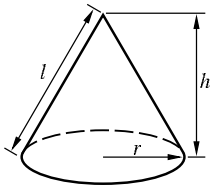
Volume of sphere $= \frac{4}{3}\pi r^3$

Surface area of sphere $= 4\pi r^2$



Volume of cone $= \frac{1}{3}\pi r^2 h$

Curved surface area of cone $= \pi rl$



The Quadratic Equation

The solutions of $ax^2 + bx + c = 0$,
where $a \neq 0$, are given by

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

1 Three of the following statements are true and **one** is false. Which one is **false**?

A $3^2 + 20^2 + 40^2 = 2009$

B $8 - 4 + 3 = 1$

C $(+15) \div (-3) = (-5)$

D $\dfrac{2 \times (3 + 4)}{2 + 3 \times 4} = 1$

2 This question refers to the following set of numbers.

14 16 18 21 23 25

Three of the following statements are true and **one** is false. Which one is **false**?

A Exactly two of the numbers are square numbers.

B Exactly one of the numbers is prime.

C Exactly one of the numbers is a multiple of 3.

D Exactly two of the numbers are factors of 400.

3 The lengths of three rivers are given in an atlas as follows.

The Nile	6695 km
The Amazon	6570 km
The Thames	346 km

Three of the following statements are true and **one** is false. Which one is **false**?

A Correct to 1 significant figure, the lengths of the Nile and Amazon are the same.

B The length of the Thames is between 210 and 220 miles.

C The length of the Nile is just less than 20 times the length of the Thames.

D Correct to 1 significant figure, the length of the Thames is 400 km.

4 A website recently recorded the following information about the population of France.

- The population is 62 752 136.
- 18.3% of the population is under 14.
- 10% of the population is over 70.

Three of the following statements are true and **one** is false. Which one is **false**?

A Expressed in standard form, correct to 3 significant figures, the population is 6.28×10^7.

B Correct to 3 significant figures, there are 1.15×10^7 under 14s.

C Correct to 3 significant figures, there are $6.28 \times 10^{0.7}$ over 70s.

D The number of under 14s exceeds the over 70s by more than 5 million.

5 A hollow cube has side of length 10 cm.
The largest possible ball that will fit into the cube is placed in the cube.

[The volume of a sphere, V, with radius r is given by $V = \frac{4}{3}\pi r^3$.]

Which **one** of the following is the **correct** value for the proportion of the volume of the cube taken by the ball?

A $\frac{1}{2}$ **B** $\frac{\pi}{4}$ **C** $\frac{1}{3}$ **D** $\frac{\pi}{6}$

6 Which **one** of the following might **reasonably** have a mass of 100 g?

A A pencil

B An apple

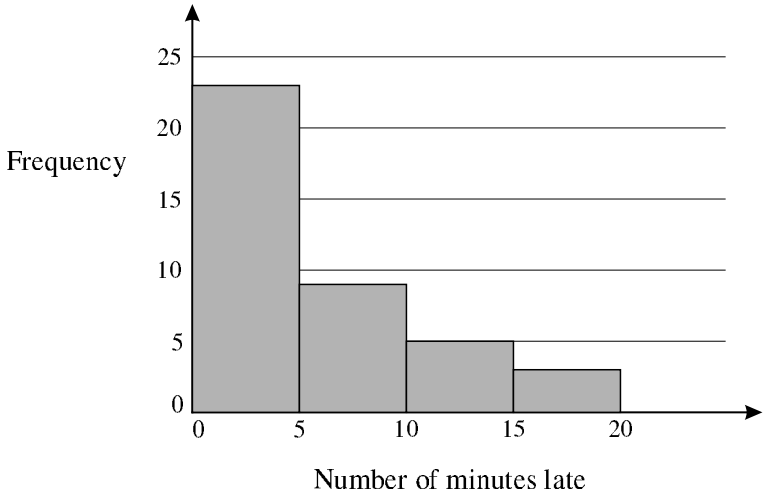
C A litre of water

D £2 worth of 2p pieces

7 The table shows the results of a survey into train arrival times.

Number of minutes late, m	$0 \leqslant m < 5$	$5 \leqslant m < 10$	$10 \leqslant m < 15$	$15 \leqslant m < 20$
Frequency	23	9	5	3

The frequency chart illustrates these data.



Three of the following statements are true and **one** is false. Which one is **false**?

A The number of trains surveyed was 40.

B The range lies between 10 and 20.

C The frequency chart is misleading.

D An estimate of the mean is 6 minutes.

8 It is estimated that Americans eat 180 acres of pizzas a day.
1 acre is approximately 4090 m^2.

A typical pizza is circular with diameter 32 cm.

Which **one** of the following is the **best** estimate for the number of pizzas that Americans eat each day?

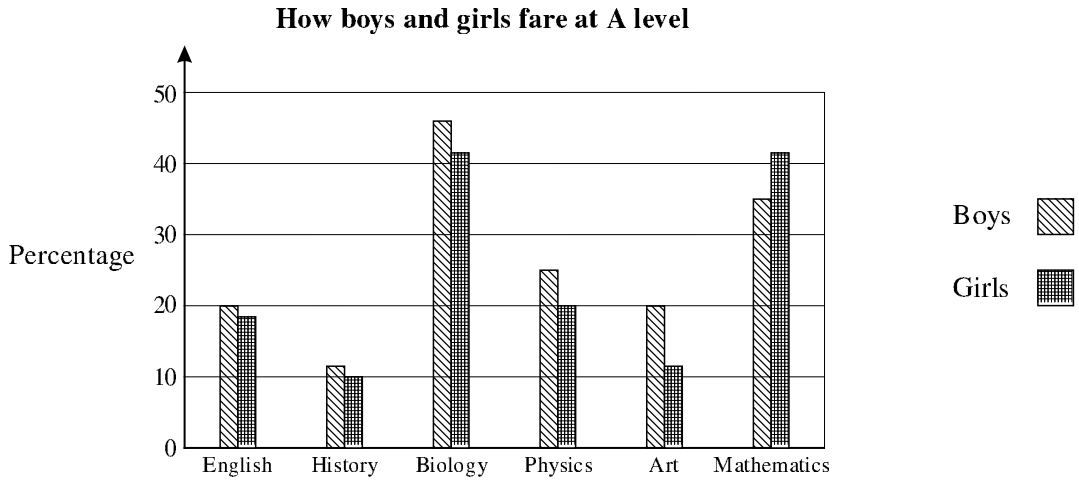
A 10 000 000

B 5 000 000

C 1 000 000

D 500 000

9 A local authority published the percentages of students obtaining grade A in various subjects, in the bar chart.



Three of the following statements are true and **one** is false. Which one is **false**?

A The subject in which there was the greatest percentage of boys obtaining a Grade A was Biology.

B A greater percentage of boys than girls obtained grade A in every subject shown except one.

C In English, more than 60% of entries failed to obtain a Grade A.

D The chart indicates that the number of students obtaining a grade A in Physics was greater than in Art.

10 Three of the following statements are true and **one** is false. Which one is **false**?

A $x = 6$ is the solution of $3(x - 2) = 0$.

B $x = 1$ is the solution of $2(x + 1) = 5 - x$.

C $x = -2$ is one of the roots of $x^2 - 4 = 0$.

D $x = 3$ is the solution of $\frac{x}{3} + \frac{x-1}{2} = 2$.

11 Three of the following statements are true and **one** is false. Which one is **false**?

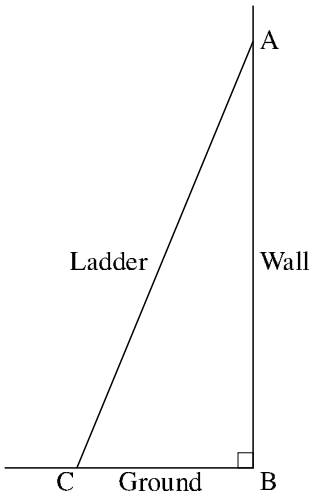
A $\frac{1}{2} + \frac{2}{3} = \frac{3}{5}$

B $\frac{2}{3} - \frac{1}{6} = \frac{1}{2}$

C Half of $\frac{3}{5}$ is $\frac{3}{10}$.

D $\frac{2}{3} \div \frac{1}{2} = 1\frac{1}{3}$

12 A ladder is 5 metres long and leans against a vertical wall as shown in the diagram. The ratio of distances AB : BC is 4 : 1.



Not to scale

Three of the following statements are true and **one** is false. Which one is **false**?

A The angle that the ladder makes with the ground is 76.0°, correct to the nearest 0.1 degree.

B The distance of the foot of the ladder from the wall is 1 metre.

C The distance up the wall of the top of the ladder is 4.9 metres, correct to 1 decimal place.

D A ladder twice as long would reach 9.7 metres up the wall, correct to 1 decimal place.

13 Shabana is making biscuits for a party.

This is the list of ingredients for the recipe she is using to make 60 biscuits.

150 g margarine
150 g sugar
1 egg
300 g self-raising flour
50 g ground almonds

Three of the following statements are true and **one** is false. Which one is **false**?

A To make 90 biscuits she will need 225 g of margarine.

B To make 40 biscuits she will need 240 g of self-raising flour.

C The ratio of ground almonds to sugar to self-raising flour is 1 : 3 : 6.

D If Shabana has only 140 g of margarine but plenty of all the other ingredients then she can only make 56 biscuits.

14 In a clothes shop, a coat that previously cost £45 is being offered in a sale for £36.

Which **one** of the following signs is **correct** for this price reduction?

A 20% reduction

B $\frac{1}{3}$ off

C Half price

D 25% off

15 A lift has a maximum carrying load of 700 kg.

Which **one** of the following is likely to be the maximum number of adults that could be carried by the lift?

A 3 **B** 9 **C** 15 **D** 21

16 Three of the following statements are true and **one** is false. Which one is **false**?

A $2x \times 2x^2 = 4x^3$

B $\dfrac{2x^2 \times 2x^4}{2x^3} = 2x^3$

C $x(x + 1) - x(x - 1) = 2x$

D $(3x^2)^2 = 6x^4$

17 In this question $a = 1$, $b = -2$, $c = 3$ and $d = -4$.

Three of the following statements are true and **one** is false. Which one is **false**?

A $abcd = 24$

B $ab + cd = 14$

C $\dfrac{a + b}{c + d} = 1$

D $\dfrac{a^2 + b^2}{c^2 + d^2} = \dfrac{1}{5}$

18 The cooking time for a joint of meat is given in a book as follows.

Cook for a quarter of an hour per pound plus 30 minutes.

The cooking time in minutes is T.
The mass of the joint of meat is m pounds.

Which **one** of the following is the **correct** formula for T?

A $T = 15m + 30$

B $T = 15(m + 30)$

C $T = \frac{1}{4}m + 30$

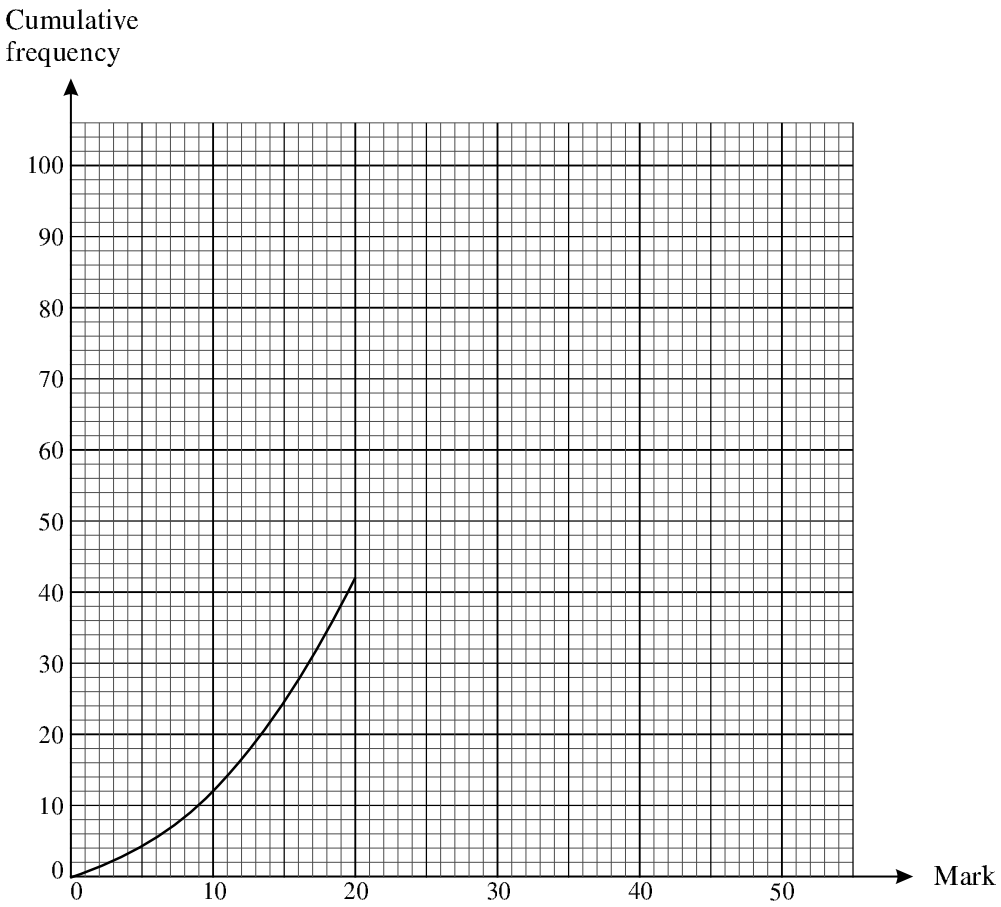
D $T = \frac{1}{4}(m + 30)$

19 The table gives a summary of the marks in a mathematics test for a group of students.

Mark, x	$0 < x \leqslant 10$	$10 < x \leqslant 20$	$20 < x \leqslant 30$	$30 < x \leqslant 40$	$40 < x \leqslant 50$
Frequency	12	30	26	18	14

In order to answer this question you should complete the cumulative frequency table and then draw the cumulative frequency curve on the grid given.

Mark	$\leqslant 10$	$\leqslant 20$	$\leqslant 30$	$\leqslant 40$	$\leqslant 50$
Cumulative frequency	12	42			



Three of the following statements are true and **one** is false. Which one is **false**?

A Marks of 100 students are recorded in the table.

B The median mark is about 23.

C The interquartile range is a little less than 20 marks.

D If the pass mark is fixed at 25, then approximately 56% of students will pass.

20 Three of the following statements are true and **one** is false. Which one is **false**?

A $s = \dfrac{3x + 4y}{7}$ can be rearranged to give $x = \dfrac{7s - 4y}{3}$.

B $s = ut + \frac{1}{2}at^2$ can be rearranged to give $a = \dfrac{2(s - ut)}{t^2}$.

C $V = \frac{1}{3}\pi r^2 h$ can be rearranged to give $r = \sqrt{\dfrac{3V}{\pi h}}$.

D $s = \frac{1}{2}r^2 x + 2r$ can be rearranged to give $x = \dfrac{2(s - r)}{r^2}$.

21 Dannii is attempting to solve the following simultaneous equations.

$$3x + 5y = 18 \qquad \text{(i)}$$
$$5x - 2y = -1 \qquad \text{(ii)}$$

Her attempt is shown in the four steps below, but the answer is incorrect.

In which of the following steps **A**, **B**, **C**, **D** does the **first** error appear?

A Multiply (i) by 2: $6x + 10y = 36$ (iii)
Multiply (ii) by 5: $25x - 10y = -5$ (iv)

B Add (iii) and (iv): $31x = 41$

C Divide by 31: $x = \frac{41}{31}$

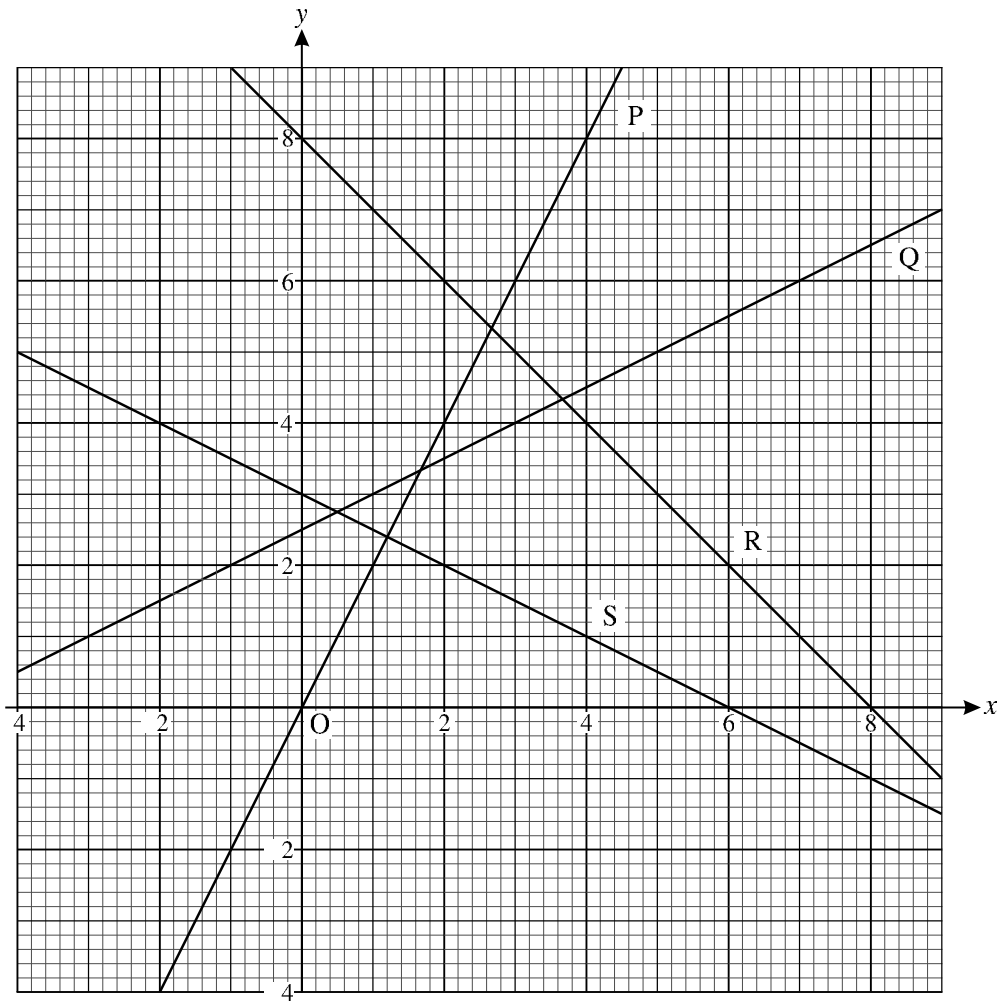
D Substitute into (ii) and solve for y: $y = \frac{87}{31}$

22 Raj is planning to recarpet his office floor. The floor is the shape of a rectangle with sides of length 3.8 m and 5.3 m.
The carpet tiles he is going to use are squares measuring 50 cm by 50 cm.
(If he cuts a tile to fill a space then he discards the remaining bit.)

Which **one** of the following is the **correct** number of tiles that he will need?

A 80 **B** 81 **C** 88 **D** 96

23 The diagram shows four lines P, Q, R and S.



Three of the following statements are true and **one** is false. Which one is **false**?

A Line P has a gradient of 2.

B Line S has a gradient of –2.

C The equation of line R is $x + y = 8$.

D The equation of the line Q is $2y = x + 5$.

24 A fair, six-sided die is rolled a number of times until the first 6 appears.

Three of the following statements are true and **one** is false. Which one is **false**?

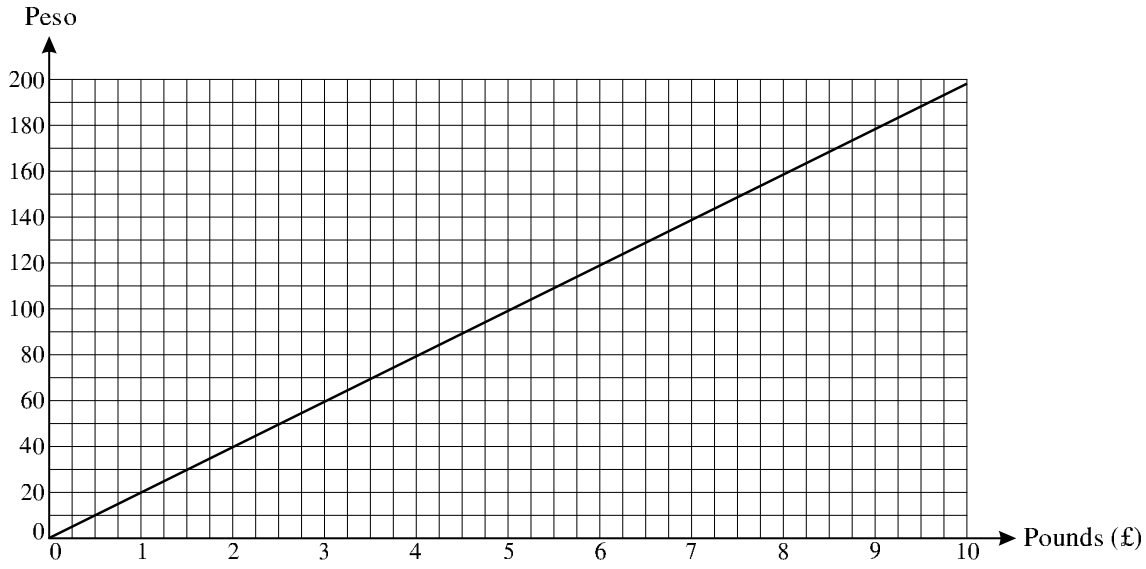
A The probability of not obtaining the first 6 on the first roll is $\frac{5}{6}$.

B The probability of obtaining the first 6 on the second roll is $\frac{5}{36}$.

C The probability of obtaining the first 6 on the third roll is $\frac{25}{216}$.

D If a 6 has not appeared after 5 rolls then it will definitely appear on the sixth roll.

25 Recently, the exchange rate from the British pound to the Mexican peso was £1 = 19.8 peso. This exchange rate is shown on the conversion graph below.



Three of the following statements are true and **one** is false. Which one is **false**?

A £8 converts to just over 158 peso.

B 180 peso converts to just over £9.

C 1 peso is worth approximately 5p.

D On another occasion the exchange rate is £1 = 21.7 peso. If a line is drawn on the graph to represent this exchange rate then it will be less steep than the one drawn.

26 Three of the following quadratic expressions can be factorised in the form $(x + a)(x + b)$ where a and b are integers. One cannot. Which one **cannot**?

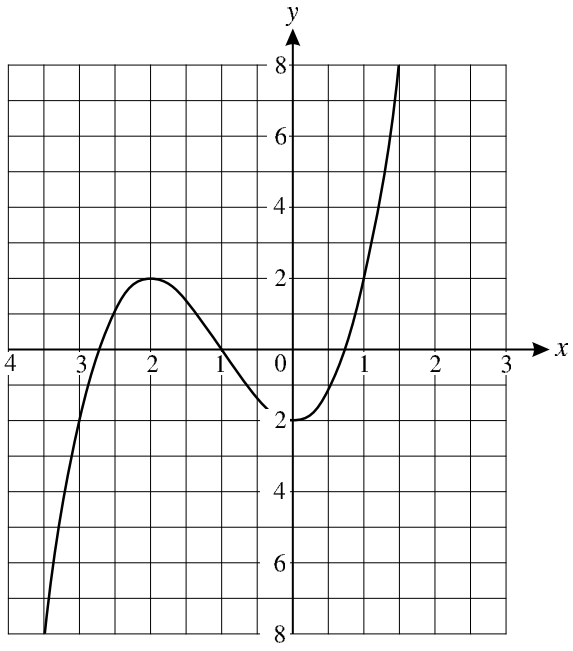
A $x^2 - 3x + 2$

B $x^2 + 8x + 15$

C $x^2 - 4x - 45$

D $x^2 + 3x - 21$

27 The graph of $y = x^3 + 3x^2 - 2$ is drawn on the grid below.



Three of the following statements are true and **one** is false. Which one is **false**?

A There are three roots of the equation $x^3 + 3x^2 - 2 = 0$, only one of which is an integer.

B The root of the equation $x^3 + 3x^2 - 2 = 6$ is approximately 1.4.

C There are three roots of the equation $x^3 + 3x^2 - 2 = k$ providing k lies in the range $-2 < k < 2$.

D The gradient of the curve when $x = 1$ is approximately 3.

28 Three of the following statements are true and **one** is false. Which one is **false**?

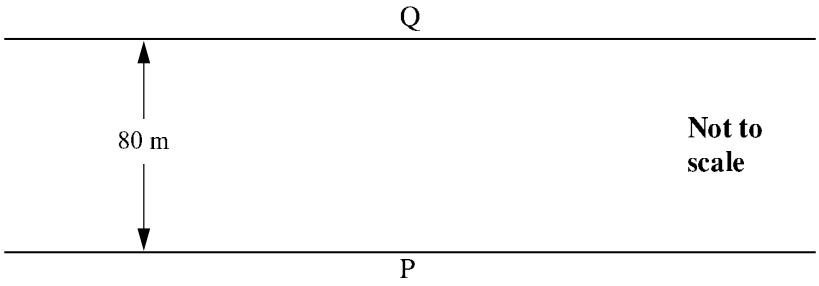
A The solution of $2x + 1 < 7 - x$ is $x < 2$.

B The solution of $\frac{x}{3} + 1 < 2$ is $x < 3$.

C The solution of $2(x + 1) > 4 + x$ is $x > 2$.

D The solution of $-3x < -12$ is $x < 4$.

29 The diagram shows a straight section of a river. Paul is intending to swim across the river from P. Q is directly opposite P. He can swim through the water at $1\ \text{m s}^{-1}$. The current is $0.5\ \text{m s}^{-1}$. The river is 80 m wide.



Three of the following statements are true and **one** is false. Which one is **false**?

A If Paul heads at right angles to the bank then his direction of travel makes an angle of 63° with the bank, correct to the nearest degree.

B If Paul heads at right angles to the bank then he will end up 40 m downstream from Q.

C If Paul heads at right angles to the bank then he will take 160 seconds to swim the river.

D If Paul wants to land at Q then he should head upstream at an angle of 60° to the bank.

30 Three vectors are given by $\mathbf{a} = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$, $\mathbf{b} = \begin{pmatrix} 3 \\ -1 \end{pmatrix}$ and $\mathbf{c} = \begin{pmatrix} -2 \\ 2 \end{pmatrix}$.

Three of the following are vectors parallel to $\begin{pmatrix} 1 \\ 0 \end{pmatrix}$ and **one** is not. Which one is **not**?

A $\mathbf{a} + \mathbf{c}$

B $\mathbf{a} + 2\mathbf{b}$

C $\mathbf{a} - \mathbf{c}$

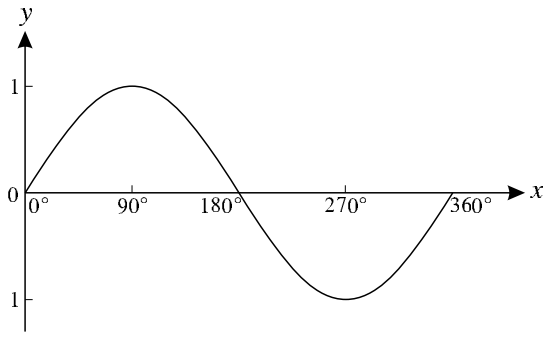
D $2\mathbf{b} + \mathbf{c}$

31 Three of the following statements are true and **one** is false. Which one is **false**?

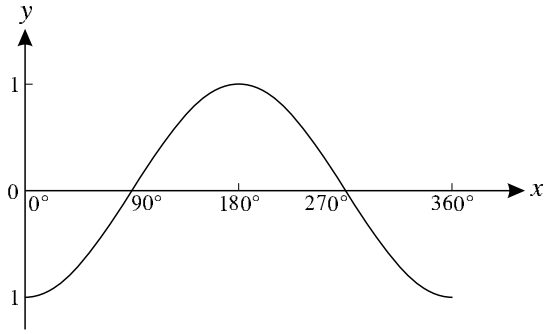
A $\cos 100^\circ = \cos 260^\circ$

B $\tan 200^\circ = -\tan 340^\circ$

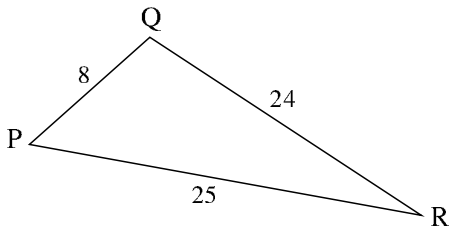
C This graph is part of the curve $y = \sin x$.



D This graph is part of the curve $y = \sin x - 1$.



32 Look at the following triangle.



Not to scale

Which **one** of the following is the **correct** size of the angle P, correct to the nearest degree?

A 74° **B** 72° **C** 71° **D** 56°

33 Dominic is purchasing pens and pencils.

5 pens and 6 pencils cost £2.13.
3 pens and 7 pencils cost £1.55.

Let x be the cost, in pence, of a pen and y be the cost, in pence, of a pencil.

Which **one** of the following pairs of simultaneous equations is **correct** for the information given?

A $5x + 6y = 2.13$
$3x + 7y = 1.55$

B $11(x + y) = 213$
$10(x + y) = 155$

C $5x + 6y = 213$
$3x + 7y = 155$

D $5x + 6y = \frac{213}{11}$
$3x + 7y = \frac{155}{10}$

34 Three of the following statements are true and **one** is false. Which one is **false**?

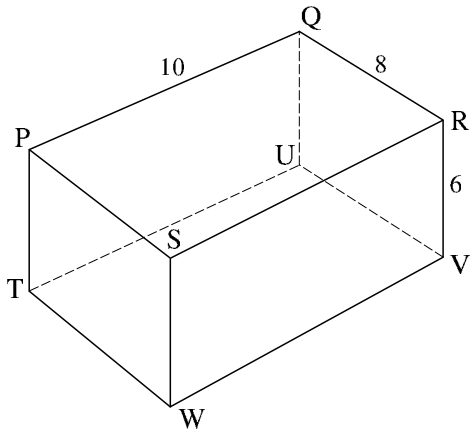
A The nth term of the sequence 1, 3, 5, 7, … is $2n + 1$.

B The nth term of the sequence 1, 2, 4, 8, … is 2^{n-1}.

C The nth term of the sequence 17, 14, 11, 8, … is $20 - 3n$.

D The nth term of the sequence 3, 7, 13, 21, … is $n^2 + n + 1$.

35 In the cuboid PQRSTUVW, PQ = 10 cm, QR = 8 cm and RV = 6 cm.



Three of the following statements are true and **one** is false. Which one is **false**?

A PR = 12.8 cm, correct to 1 decimal place.

B Angle SUW = 25°, correct to the nearest degree.

C Angle PVW = 45°.

D Angle UPW = 90°.

36 Which **one** of the following is a **correct** expansion of $(x - 3)(x + 4)$?

A $x^2 + x + 12$

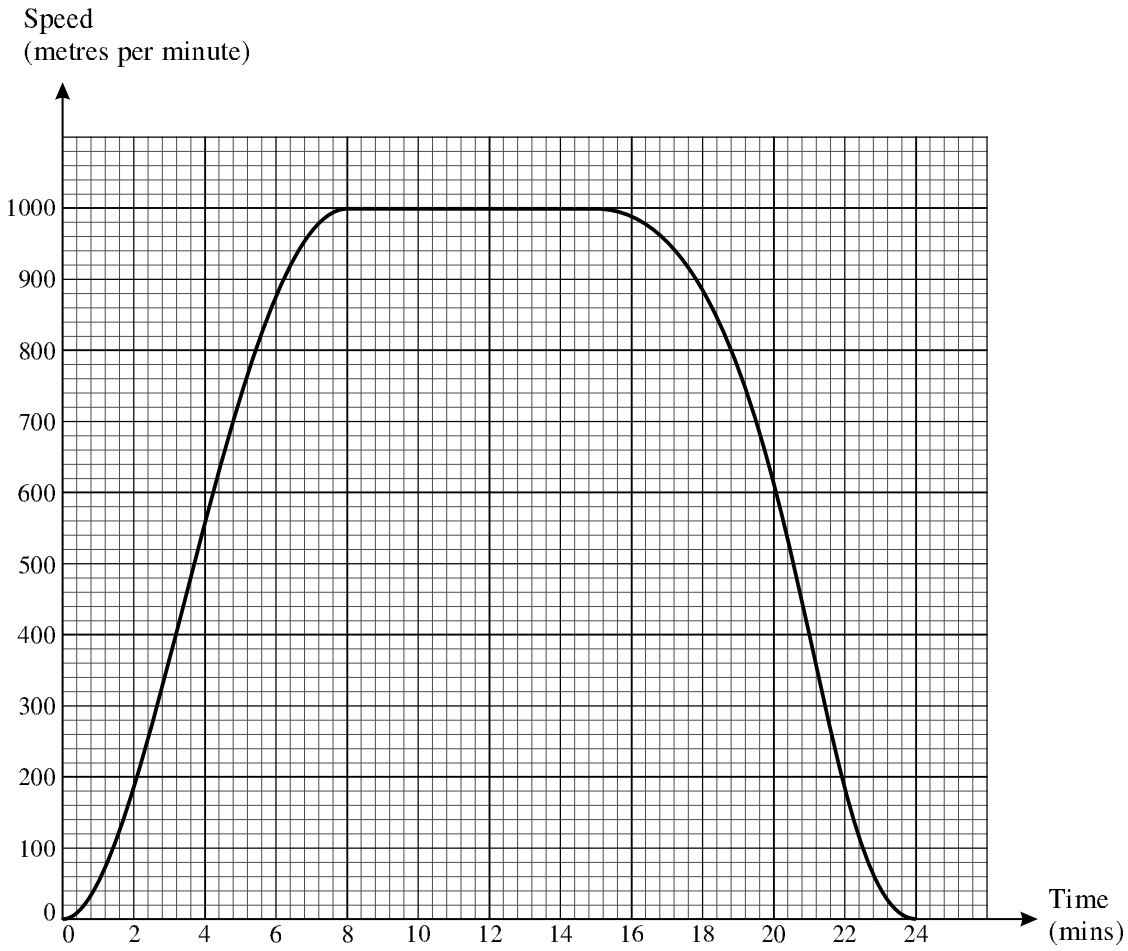
B $x^2 - x + 12$

C $x^2 + 7x - 12$

D $x^2 + x - 12$

37 A train moves from rest at station S to a maximum speed of 1000 metres per minute. It r
this speed for 7 minutes before slowing and coming to rest at station T. The total journey t
24 minutes.

The graph of the motion of the train is shown below.



Which **one** of the following is the **best** estimate of the distance between the two stations?

A 9000 m **B** 12 000 m **C** 17 000 m **D** 24 000 m

TURN OVER FOR QUESTIONS 38, 39 AND 40.

38 Which **one** of the following is the **correct** solution to the quadratic equation $3x^2 - 5x = 1$?

A $x = \dfrac{5 \pm \sqrt{37}}{6}$

B $x = \dfrac{-5 \pm \sqrt{37}}{6}$

C $x = \dfrac{5 \pm \sqrt{13}}{6}$

D $x = \dfrac{-5 \pm \sqrt{13}}{6}$

39 Which **one** of the following is a **correct** simplification of $\dfrac{a+b}{2} - \dfrac{a-b}{3}$?

A $\dfrac{a+5b}{6}$

B $\dfrac{a+2b}{6}$

C $\dfrac{a+b}{6}$

D $\dfrac{a+b}{5}$

40 Staff absences at a firm are recorded daily for a period of ten days as follows.

Number of days absent	0	1	2	3	4	5	6	7	8	9	10
Number of staff	37	16	15	5	3	7	2	1	0	0	7

The Managing Director wants to find an average value and a measure of spread.

Bill says "The most appropriate measure for an average is the median. This is because the mode is 0 which is not representative and the mean is affected by the number of people who are off sick and have been absent for the whole period."

Charlie says "The range depends only on the extremes so a better measure of spread is the interquartile range."

Which **one** of the following statements is **true**?

A Bill and Charlie are both incorrect.

B Bill and Charlie are both correct.

C Bill is correct but Charlie is incorrect.

D Charlie is correct but Bill is incorrect.

OCR
RECOGNISING ACHIEVEMENT

FSMQ

Foundations of Advanced Mathematics (MEI)

INTERMEDIATE FSMQ **6989**

Mark Schemes for the Units

June 2009

6989/MS/R/09

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by Examiners. It does not indicate the details of the discussions which took place at an Examiners' meeting before marking commenced.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

Any enquiries about publications should be addressed to:

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Foundations of Advanced Mathematics FSMQ (6989)

MARK SCHEMES FOR THE UNITS

Foundations of Advanced Mathematics – 6989

Markscheme and Report

1	B
2	C
3	D
4	C
5	D
6	B
7	C
8	A
9	D
10	A
11	A
12	B
13	B
14	A
15	B
16	D
17	B
18	A
19	D
20	D

21	B
22	C
23	B
24	D
25	D
26	D
27	D
28	D
29	C
30	A
31	D
32	A
33	C
34	A
35	D
36	D
37	C
38	A
39	A
40	B

Grade Thresholds

Foundations of Advanced Mathematics FSMQ (6989)
June 2009 Assessment Series

Unit Threshold Marks

Unit	Maximum Mark	A	B	C	D	E	U
6989	40	31	27	23	19	16	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
6989	9.7	25.3	48.3	76.4	90.1	100	1511

OCR
RECOGNISING ACHIEVEMENT

FSMQ

Foundations of Advanced Mathematics (MEI)

INTERMEDIATE FSMQ **6989**

Report on the Unit

June 2009

6989/MS/R09

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This report on the Examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the syllabus content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the Examination.

OCR will not enter into any discussion or correspondence in connection with this Report.

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Foundations of Advanced Mathematics FSMQ (6989)

REPORT ON THE UNIT

Report on the unit taken in June 2009

Foundations of Advanced Mathematics – 6989

There were 1511 entries for this session, an encouraging increase from last year. The mean mark was 22.7. The minimum mark scored by 2 candidates was 6 and the maximum mark was 39, scored by 6 candidates.

In 7 questions the wrong response was selected by more candidates than the right response, and in 9 others fewer than 50% chose the correct response.

Q5 Equal numbers chose B and D as their response.

Q7 The correct response of C was 3rd most popular choice, behind B and D.

Q8 The correct response of A was 3rd most popular choice, behind C and D.

Q9 More than 50% chose C as their response, the correct one being D.

Q22 More than 60% chose B as their response, the correct one being C.

Q35 Marginally more chose B as their response, the correct one being D.

Q39 More chose C as their response rather then the correct one of A.

More than 1% of the candidature chose not to offer a response to questions 5, 12, 27, 29, 31, 32 and 35. Otherwise there was a scattering of non-responses, but in no particular pattern and certainly not giving any indication that he paper was too long or too hard.

As in previous sessions I offer a summary of questions and topics with the approximate percentage of candidates giving the correct responses.

Report on the unit taken in June 2009

	Question	Topic
91 – 100%	14	Arithmetic - percentages
81 – 90%	1	Arithmetic
	2	Arithmetic
	10	Algebra – solution of linear equations
	11	Arithmetic - fractions
	13	Arithmetic - ratios
	24	Probability – rolling a die
	25	Arithmetic – exchange rates
71 - 80%	3	Arithmetic – rounding of numbers
	4	Arithmetic – standard form
	15	Arithmetic - approximations
	17	Algebra - substitution
	18	Algebra – interpretation of formula
	21	Algebra – solution of simultaneous equations
	36	Algebra – expansion of brackets
61 - 70%	6	Arithmetic – choice of units
	34	Algebra - sequences
51 - 60%	16	Algebra – manipulation of terms
	23	Coordinate geometry – gradients of lines
	26	Algebra – factorisation of quadratic expressions
	30	Vectors
	33	Algebra – construction of simultaneous equations
41 - 50%	20	Algebra – rearrangement of formulae
	37	Graphs – interpretation of speed/time graph
31 - 40%	5	Mensuration
	9	Statistics – interpretation of bar chart
	12	Trigonometry – right-angled triangle
	19	Statistics – cumulative frequency
	27	Coordinate geometry – interpretation of cubic graph
	28	Algebra – linear inequalities
	29	Trigonometry – right angled triangles
	31	Trigonometry – angles greater than 90°
	32	Trigonometry – cosine formula
	35	Trigonometry – Pythagoras in 3-D
	38	Algebra – solution of quadratic equation by formula
	39	Algebra – simplification of addition of algebraic fractions
	40	Statistics – measures of central tendency and range
21 - 30%	7	Statistics – interpretation of frequency diagram
	8	Arithmetic - estimation
	22	Arithmetic – area

Report on the unit taken in June 2009

Answers.

1	B	21	B
2	C	22	C
3	D	23	B
4	C	24	D
5	D	25	D
6	B	26	D
7	C	27	D
8	A	28	D
9	D	29	C
10	A	30	A
11	A	31	D
12	B	32	A
13	B	33	C
14	A	34	A
15	B	35	D
16	D	36	D
17	B	37	C
18	A	38	A
19	D	39	A
20	D	40	B

Report on the components taken in June 2009

Grade Thresholds

Foundations of Advanced Mathematics FSMQ (6989)
June 2009 Assessment Series

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