Year 2005

VCE

Further Mathematics

Trial Examination 1

VICTORIAN CERTIFICATE OF EDUCATION
2005

FURTHER MATHEMATICS

Trial Written Examination 1 (Facts, skills and applications)

Reading time: 15 minutes
Total writing time: 1 hour 30 minutes

MULTIPLE-CHOICE QUESTION BOOK

Structure of book

Section	Number of questions	Number of questions to be answered	Number of modules	Number of modules to be answered
A	13	13		
B	45	27	5	3

Directions to students

Materials
Question book of 36 pages.
Answer sheet for multiple-choice questions.
There is a detachable sheet of miscellaneous formula supplied.
Working space is provided throughout the book.
You may bring to the examination up to four pages (two A4 sheets) of pre-written notes.
An approved scientific and/or graphics calculator may be used.
You should have at least one pencil and an eraser.

Detach the formula sheet from the book during reading time.
Please ensure that your **name and student number** as printed on your answer sheet for multiple-choice questions are correct, **and** sign your name in the space provided to verify this.
Answer **all** questions from Section A
You should select three modules from Section B and answer **all** questions within the modules selected.
Indicate the modules selected on the answer sheet for multiple-choice questions by shading the corresponding boxes.
There is a total of 13 marks available for Section A and 9 marks for each module in Section B
There is a total of 40 marks available for this examination.
All questions should be answered on the answer sheet for multiple-choice questions provided.
Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.
You may retain this question book.

Students are NOT permitted to bring mobile phones and/or any other electronic communication devices into the examination room.

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VCE FURTHER MATHEMATICS 2005
Trial Written Examination 1
ANSWER SHEET

NAME:

**STUDENT
NUMBER**

SIGNATURE

Instructions

- Write your name in the space provided above.

- Write your student number in the space provided above. Sign your name.

- Use a **PENCIL** for **ALL** entries.
  If you make a mistake, **ERASE** it - **DO NOT** cross it out.

- Marks will **NOT** be deducted for incorrect answers.

- **NO MARK** will be given if more than **ONE** answer is completed for any question.

- All answers must be completed like **THIS** example.

A	B	C	D	E

Section A

1	A	B	C	D	E
2	A	B	C	D	E
3	A	B	C	D	E
4	A	B	C	D	E
5	A	B	C	D	E
6	A	B	C	D	E
7	A	B	C	D	E
8	A	B	C	D	E
9	A	B	C	D	E
10	A	B	C	D	E
11	A	B	C	D	E
12	A	B	C	D	E
13	A	B	C	D	E

Section B (Shade the boxes of the three modules selected)

	Module 1						
	Number patterns and applications	**1**	A	B	C	D	E
		2	A	B	C	D	E
		3	A	B	C	D	E
		4	A	B	C	D	E
		5	A	B	C	D	E
		6	A	B	C	D	E
		7	A	B	C	D	E
		8	A	B	C	D	E
		9	A	B	C	D	E
	Module 2	**1**	A	B	C	D	E
		2	A	B	C	D	E
	Geometry and trigonometry	**3**	A	B	C	D	E
		4	A	B	C	D	E
		5	A	B	C	D	E
		6	A	B	C	D	E
		7	A	B	C	D	E
		8	A	B	C	D	E
		9	A	B	C	D	E
	Module 3	**1**	A	B	C	D	E
		2	A	B	C	D	E
	Graphs and relations	**3**	A	B	C	D	E
		4	A	B	C	D	E
		5	A	B	C	D	E
		6	A	B	C	D	E
		7	A	B	C	D	E
		8	A	B	C	D	E
		9	A	B	C	D	E
	Module 4	**1**	A	B	C	D	E
		2	A	B	C	D	E
	Business-related mathematics	**3**	A	B	C	D	E
		4	A	B	C	D	E
		5	A	B	C	D	E
		6	A	B	C	D	E
		7	A	B	C	D	E
		8	A	B	C	D	E
		9	A	B	C	D	E
	Module 5	**1**	A	B	C	D	E
		2	A	B	C	D	E
	Networks and decision mathematics	**3**	A	B	C	D	E
		4	A	B	C	D	E
		5	A	B	C	D	E
		6	A	B	C	D	E
		7	A	B	C	D	E
		8	A	B	C	D	E
		9	A	B	C	D	E

Please DO NOT fold, bend or staple this form

FURTHER MATHEMATICS

Written examinations 1 and 2

FORMULA SHEET

Directions to students

Detach this formula sheet during reading time.

This formula sheet is provided for your reference.

Further Mathematics Formulas

Business-related mathematics

simple interest: $I = \dfrac{\Pr T}{100}$

compound interest: $A = PR^n$ where $R = 1 + \dfrac{r}{100}$

hire purchase: effective rate of interest $= \dfrac{2n}{n+1}$ x flat rate

annuities: $A = PR^n - \dfrac{Q(R^n - 1)}{R - 1}$, where $R = 1 + \dfrac{r}{100}$

Geometry and trigonometry

area of a triangle: $\dfrac{1}{2}bh$

area of a triangle: $\dfrac{1}{2}bc \sin A$

area of circle: πr^2

volume of sphere: $\dfrac{4}{3}\pi r^3$

volume of cone: $\dfrac{1}{3}\pi r^2 h$

Pythagoras' theorem: $c^2 = a^2 + b^2$

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

cosine rule: $c^2 = a^2 + b^2 - 2ab \cos C$

Graphs and relations

Straight line graphs

gradient $\qquad m = \dfrac{y_2 - y_1}{x_2 - x_1}$

equation $\qquad y - y_1 = m(x - x_1) \qquad$ gradient-point form

$\qquad\qquad\qquad y = mx + c \qquad\qquad$ gradient-intercept form

$\qquad\qquad\qquad \dfrac{y - y_1}{x - x_1} = \dfrac{y_2 - y_1}{x_2 - x_1} \qquad$ two-point form

Number patterns and applications

arithmetic series: $\qquad a + (a + d) + \ldots + (a + (n-1)d) = \dfrac{n}{2}[2a + (n-1)d] = \dfrac{n}{2}(a + l)$

geometric series: $\qquad a + ar + ar^2 + \ldots + ar^{n-1} = \dfrac{a(1 - r^n)}{1 - r}, r \neq 1$

infinite geometric series: $\qquad a + ar + ar^2 + ar^3 + \ldots = \dfrac{a}{1 - r}, |r| < 1$

linear difference equations: $\quad t_n = at_{n-1} + b = a^{n-1}t_1 + b\dfrac{(a^{n-1} - 1)}{a - 1}, a \neq 1$

$$= a^n t_0 + b\dfrac{(a^n - 1)}{a - 1}$$

Networks and decision mathematics

Euler's formula: $\qquad v + f = e + 2$

Statistics

seasonal index: $\qquad$ seasonal index $= \dfrac{\text{actual figure}}{\text{deseasonalised figure}}$

END OF FORMULA SHEET

Core

The following information relates to Questions 1 and 2

The salaries, in thousands of dollars, of male and female sales people working for a particular company are displayed in the following parallel box plots.

Question 1

The interquartile range for males is

A.   1.9

B.   3.2

C.   3.8

D.   4.8

E.   9.0

Question 2

Which **one** of the following statements is **true** with respect to the parallel box plots?

A.   Overall, males tend to earn less than the females.

B.   The males have a larger range of salaries than the females.

C.   50% of males have a salary less than $34,600.

D.   50% of females have a salary either less than $34,000 or greater than $37,200.

E.   25% of males have a salary between $34,600 and $38,400

Question 3

The distribution of the marks given in a state wide mathematics test is bell shaped with a mean of 55. If 2.5% of students get a higher mark than 77, then the standard deviation is

A.   2

B.   3

C.   5

D.   10

E.   11

The following information relates to Questions 4 and 5

	Liberal Voter	Labour Voter	Total
Republic	16	55	
No Republic	83		
Total		127	

A sample of people in the street were asked whether they wanted a republic or not, and whether they voted Liberal or Labour. The results are given in the table above.

Question 4

The total number of people interviewed was

A.   72

B.   99

C.   154

D.   226

E.   281

Question 5

The percentage of people who did not want a republic and voted labour was closest to

A.   43%

B.   46%

C.   56%

D.   57%

E.   87%

Question 6

The coefficient of determination for two variables x and y is 0.0676, and as x increases in size, y decreases in size. Which **one** of the following statements is **true**?

A.   Pearson's product – moment correlation coefficient equals 0.26

B.   There is a strong negative linear association between the two variables

C.   There is a weak negative linear association between the two variables

D.   There is a strong positive linear association between the two variables

E.   There is a weak positive linear association between the two variables

The following information relates to Questions 7 and 8

There are nine students studying Year 12 Anthropology. At the end of the course, the students are asked to rate the teacher with a score from 1 to 20. The higher the score, the higher the regard for the teacher. The following scatter plot shows the rating along with each student's mark for the examination in this subject.
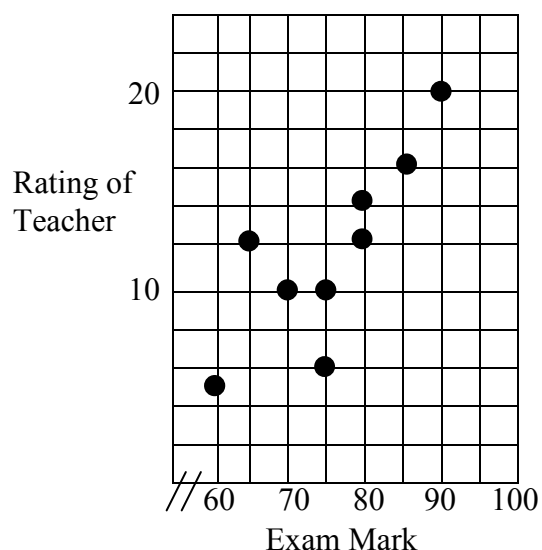
Question 7

When the three median regression line is fitted to this scatter plot, the gradient is closest to

A.   0.2

B.   0.3

C.   0.4

D.   0.5

E.   0.7

Question 8

The *Y* intercept of the three median regression line is closest to

A.   −10.5

B.   −9.0

C.   −3.5

D.   1.5

E.   2.0

Question 9

A real estate agent finds that in a certain town house prices increase for between five and seven years, and then decrease for between five and seven years. This pattern seems to repeat itself. This is an example of

A.   secular trend

B.   seasonal trend

C.   cyclic trend

D.   random trend

E.   irregular trend

Question 10
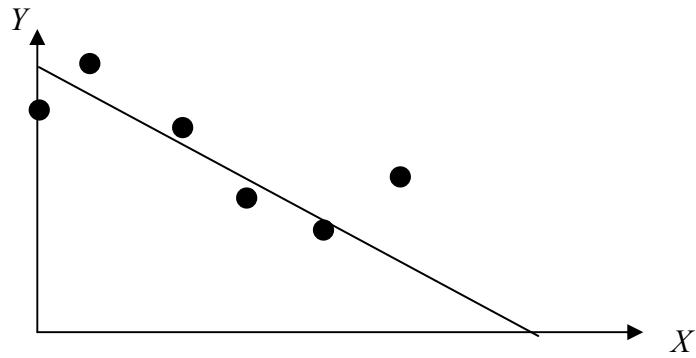
Which one of the following could be the residual plot for the regression line fitted to the above scatter plot?

A.	D.
B.	E.
C.	

Question 11

Two of the seasonal indices for sales in a particular company are given below.

Season	Spring	Summer	Autumn	Winter
Seasonal Index	1.02			0.82

If the index for summer is double the autumn index, then the summer index is

A.   0.08

B.   0.72

C.   1.08

D.   1.44

E.   3.08

Question 12

Week	Sales
1	3.7
2	4.7
3	3.2
4	2.8
5	4.9
6	5.3

 The above table shows the sales figures in thousands of dollars for six weeks. The 3 – point moving average for week 4 is closest to

A.   3.6

B.   3.7

C.   3.8

D.   3.9

E.   4.3

Question 13

Year	Spring	Summer	Autumn	Winter
2003	7.4	5.8	8.1	9.3
2004	7.8	5.6	7.9	9.4
2005	7.7	5.9	7.5	9.3

The deseasonalised value for summer 2005 in the above data is closest to

A.   7.5

B.   7.8

C.   7.9

D.   8.1

E.   8.3

END OF SECTION A

<table>
<tr><td colspan="2">Specific Instructions for Section B</td></tr>
</table>

Specific Instructions for Section B

Section A consists of 5 modules

You should select 3 modules and answer **all** questions within the modules on the answer sheet for multiple-choice questions provided. Indicate the modules selected on the answer sheet for multiple-choice questions by shading the corresponding boxes.

A correct answer scores 1 mark, an incorrect answer scores 0. No mark will be given for a question if two or more letters are shaded for that question. Marks will not be deducted for incorrect answers and you should attempt every question within the modules selected.

Module 1: Number patterns and applications

Before answering these questions you **must** shade the Number patterns and applications box on the answer sheet for multiple-choice questions

Question 1
The common difference for the sequence $t_n = 3n + 2$ is
A.   1

B.   1.5

C.   2

D.   3

E.   5

Question 2

The sum of the first ten terms of an arithmetic sequence, where the first term is 7 and the tenth term is 37 is
A.   100

B.   220

C.   350

D.   400

E.   440

Question 3

The sum to infinity of the series $3 + \dfrac{3}{2} + \dfrac{3}{4} + \ldots\ldots$ is

A. $4\dfrac{3}{4}$

B. $5\dfrac{1}{2}$

C. $5\dfrac{3}{4}$

D.   6

E.   18

Question 4
Sam, Abdul and Wei Lei run a business where they share the profits in the ratio 1:3:4
In the year 2005, the total profit for the business is $120,000. Sam's share of the profit is

A. $15,000

B. $30,000

C. $40,000

D. $45,000

E. $60,000

Question 5

The least number of terms of the sequence 8, 13, 18, 23….. that must be added to give a total sum greater than 100 is

A.   5

B.   6

C.   7

D.   8

E.   9

The following information relates to Questions 6 and 7

Question 6

Each year the value of a computer decreases by 6% of its value at the beginning of the year. If the value of the computer was $3,000 on July 1st. 2005, then the value of the computer on July 1st 2009 will be closest to

A. $2201

B. $2202

C. $2342

D. $2491

E. $2492

Question 7

The difference equation for this depreciation would be

A. $t_{n+1} = t_n - 0.06, \qquad t_1 = 3000$

B. $t_{n+1} = t_n - 0.94, \qquad t_1 = 3000$

C. $t_{n+1} = 1.6t_n, \qquad t_1 = 3000$

D. $t_{n+1} = 1.06t_n, \qquad t_1 = 3000$

E. $t_{n+1} = 0.94t_n, \qquad t_1 = 3000$

Question 8

The sum of the first four terms of an arithmetic sequence is 54 and the sum of the next four terms is 102. The value of the common difference is

A.   2

B.   3

C.   4

D.   6

E.   9

Question 9

Mae Lynn has 0.5 litres of a 20% solution of copper sulphate, but she needs one litre of a 15% solution for today's work in the chemistry laboratory. The volume of the original solution of copper sulphate she needs to use is

A.　　0.25 litres

B.　　0.33 litres

C.　　0.5 litres

D.　　0.66 litres

E.　　0.75 litres

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End of Module 1

</div>

Module 2: Geometry and trigonometry

Before answering these questions you **must** shade the Geometry and trigonometry box on the answer sheet for multiple-choice questions
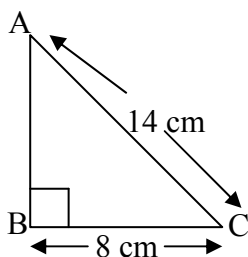
Question 1

For the right angled triangle, *ABC*, with *AC* = 14 cm and *BC* = 8 cm, the size of angle *ACB* is closest to

A. 30^0

B. 35^0

C. 55^0

D. 57^0

E. 60^0
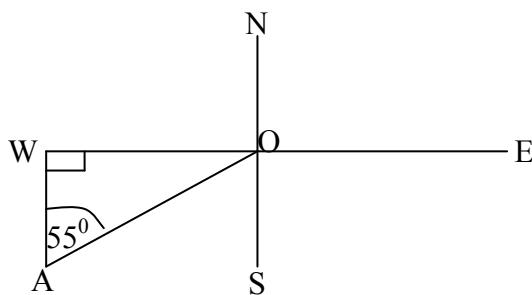
Question 2

The bearing of A from O is

A. 055^0 T

B. 215^0 T

C. 235^0 T

D.   S35^0 W

E.   S215^0
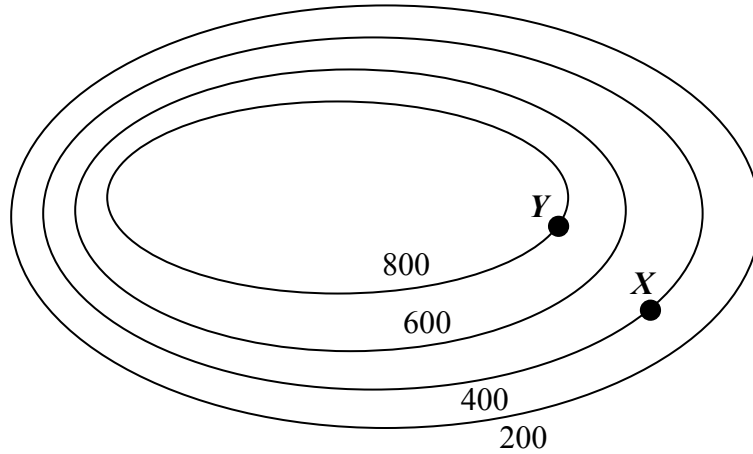
Question 3

For the contour map given above, the direct distance from *X* to *Y* is 500 metres. The angle of elevation from *X* to *Y* is closest to

A. 34^0

B. 37^0

C. 39^0

D. 53^0

E. 56^0
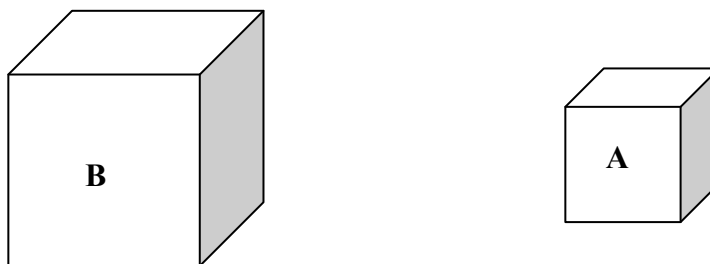
Question 4

The ratio of the volumes of cube **A** to cube **B** is 1 **:** 64. If the volume of cube A is 1000 cm^3, then the area of one face of cube B in square centimetres is closest to
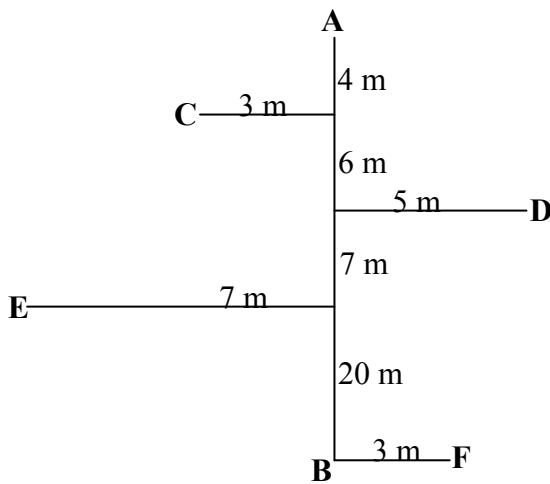
A.   16

B.   252

C.   400

D.   1600

E.   4000

Question 5
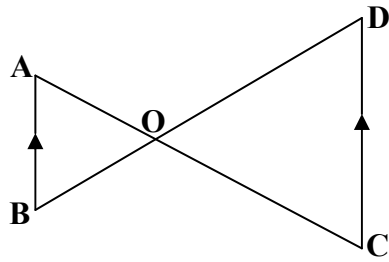
In the above figure, AB is parallel to CD. If AB = 1.0 cm, AO = 4.0 cm and CD = 2.5 cm, then the length of OC in centimetres is

A.   0.625

B.   1.6

C.   6.0

D.   9.7

E.   10.0

Question 6

A traverse survey is shown above. The distance from F to D in metres is closest to

A.   8.6

B.   13.9

C.   27.1

D.   27.2

E.   27.5

Question 7

In a triangle ABC, BC = 10, AC = 16 and $\angle BAC = 30^0$. The largest value $\angle ABC$ can be is closest to

A. 18^0

B. 53^0

C. 97^0

D. 127^0

E. 144^0
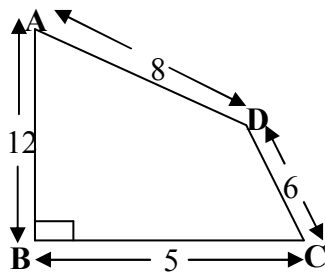
Question 8

In the figure, ABCD, where AB = 12, BC = 5, CD = 6, DA = 8 and $\angle ABC = 90^0$, $\angle ADC$ is closest to

A. 110^0

B. 112^0

C. 124^0

D. 136^0

E. 145^0
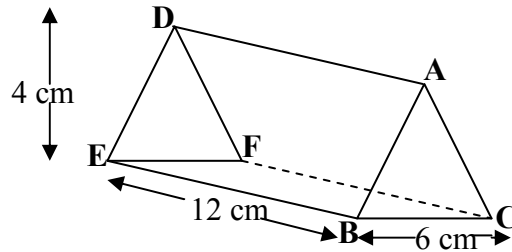
Question 9

The surface area of the above solid shape with height 4 cm. and where BC = 6 cm. and EB = 12 cm. is

A. 120 cm^2

B. 156 cm^2

C. 192 cm^2

D. 216 cm^2

E. 288 cm^2

End of Module 2

Module 3: Graphs and relations

Before answering these questions you **must** shade the Graphs and relations box on the answer sheet for multiple-choice questions

Question 1

The *X* intercept of the line $3x + 7y - 6 = 0$ is

A.   2

B.   −6

C.   6

D.   −7

E.   7

Question 2

The intersection of the lines, $2x - 3y = -7$ and $3x + 8y = 2$, occurs when *x* equals

A.   1

B.   −1

C.   2

D.   −2

E.   3

Question 3

Carmen pays $35 a month for her mobile telephone and 30 cents per minute for her calls. If she spends *n* minutes on calls during the month of October, then the cost of her telephone bill for this month could be given by

A. $C = 0.03n + 35$

B. $C = 0.3n + 35$

C. $C = 3n + 35$

D. $C = 35 + 30n$

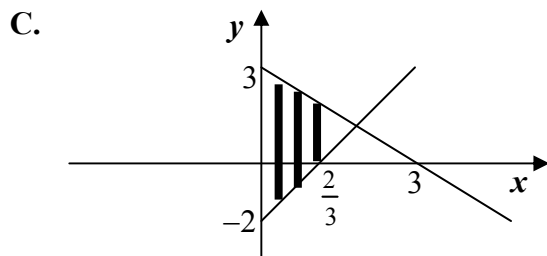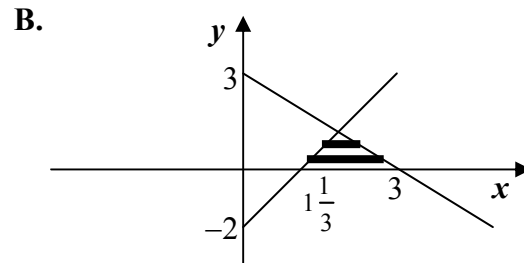E. $C = 35 + 300n$

Question 4

The equation of a line passing through a point $(-1, -4)$ which is parallel to a line with a slope of 2 is

A. $y + 2x - 4 = 0$

B. $y + 2x - 6 = 0$

C. $y - 2x - 6 = 0$

D. $y - 2x + 6 = 0$

E. $y - 2x + 2 = 0$

Question 5

The solution of $x + y \leq 3$ and $2y - 3x + 4 \geq 0$ is shown as the shaded area in which one of the following graphs?

A.

B.

C.

D.

E.
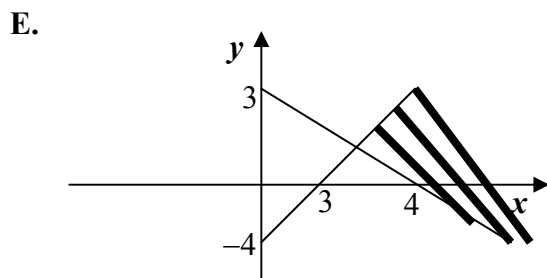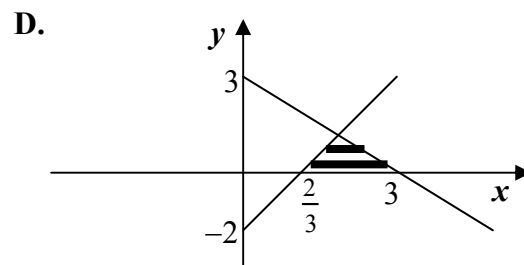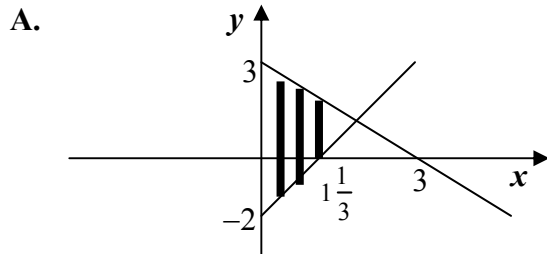
Question 6

The revenue, in thousands of dollars, of producing x copies of a book is $25x$. If the cost to produce these books is $18x - 1200$, then the profit, P, per book is
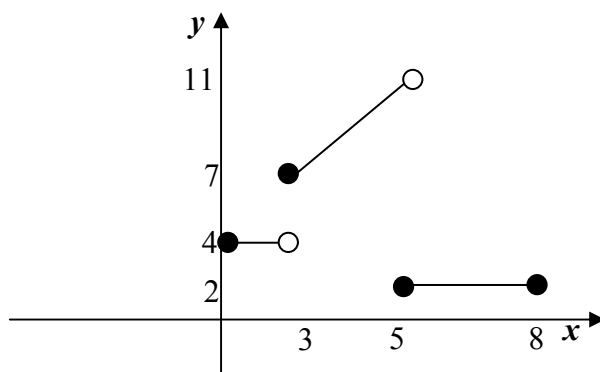
A. $\dfrac{1200 - 7x}{x}$

B. $\dfrac{7x - 1200}{x}$

C. $\dfrac{7x + 1200}{x}$

D. 1207

E. 1193

Question 7

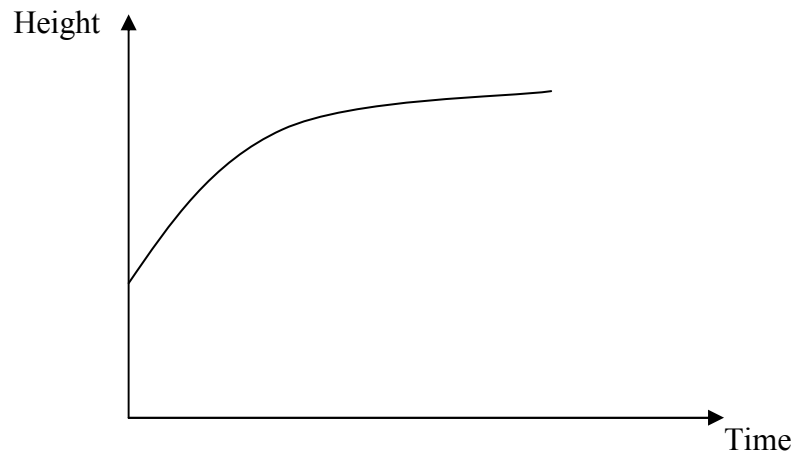**A.** $y = \begin{cases} 4 & 0 \le x < 3 \\ 2x+1 & 3 \le x < 5 \\ 2 & 5 \le x \le 8 \end{cases}$

B. $y = \begin{cases} 4 & 0 < x \le 3 \\ 2x+1 & 3 < x \le 5 \\ 2 & 5 < x < 8 \end{cases}$

C. $y = \begin{cases} 4 & 0 \le x < 3 \\ 2x+7 & 3 \le x < 5 \\ 2 & 5 \le x \le 8 \end{cases}$

D. $y = \begin{cases} 4 & 0 < x \le 3 \\ 2x+7 & 3 < x \le 5 \\ 2 & 5 < x < 8 \end{cases}$

E. $y = \begin{cases} 4 & 0 \le x < 3 \\ 7x+2 & 3 \le x < 5 \\ 2 & 5 \le x \le 8 \end{cases}$
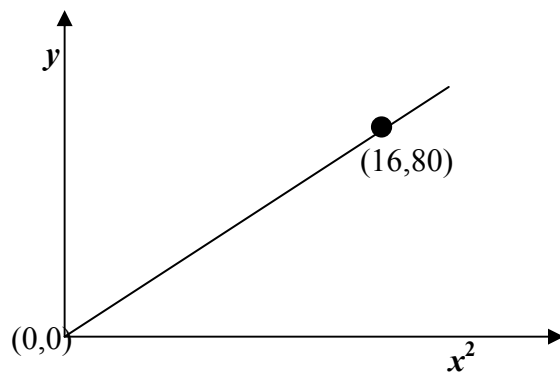
Question 8

Height

Time

The above graph shows the height of the water in a vase as it is being filled with a constant rate of water flow. This shows that the vase is

A. the same width all the way up

B. wide at the bottom and getting narrower as you go up the vase

C. wide at the top and getting narrower as you go down the vase

D. wide at the bottom, then gets narrower near the centre and then wide again near the top

E. narrow at the bottom, then gets wide near the centre and then narrow again near the top

Module 3

Question 9

The graph above can be described by which one of the following equations.

A. $y = 5x$

B. $y = 4x$

C. $y = -5x$

D. $y = 4x^2$

E. $y = 5x^2$

End of Module 3

Module 4: Business-related mathematics

Before answering these questions you **must** shade the Business-related mathematics box on the answer sheet for multiple-choice questions

Question 1

A loan of $2,000 is repaid with four monthly instalments of $530 per month. The interest paid on the loan is

A. $20

B. $120

C. $1,470

D. $2,120

E. $4,360

The following information relates to Questions 2 and 3

Date	Deposits	Withdrawals	Balance
2 Jan	$200		$4,600
12 Jan	$400		
17 Jan		$300	
28 Jan			$5,900

The above table shows Luke's transactions for the month of January.

Question 2

Which one of the following statements is true with regard to the above table?

A.   Luke withdrew $100 on 28th January.

B.   Luke withdrew $200 on 28th January.

C.   Luke had a balance of $5,300 on 17th January

D.   Luke had a balance of $6,600 on 17th January

E.   Luke deposited a total of $800 in January

Question 3

Luke's minimum monthly balance for January was

A. $200

B. $400

C. $4,300

D. $4,400

E. $4,600

Question 4

G.S.T. of 10% is charged on a refrigerator that costs $1,800. The cost of the refrigerator including G.S.T. is

A. $1,720

B. $1,820

C. $1,880

D. $1,980

E. $2,600

Question 5

The number of rabbits in a country area of Victoria is decreasing by a fixed number each year. If the population of rabbits was 720 on January 1st 2000 and 480 on January 1st 2005, then the population of rabbits on January 1st 2008 would be

A.   144

B.   196

C.   336

D.   376

E.   384

Question 6

Interest is charged on a loan of $10,000 at a rate of 8% per annum. The interest is calculated on the outstanding balance at the end of each month. Monthly payments of $600 are made. After nine months, the amount owing is closest to

A. $2,498

B. $5,005

C. $5,072

D. $5,167

E. $12,498

Question 7

Jan invests $30,000 at 5.5% per annum compound interest. The interest is paid every six months. The value of her investment after five years will be closest to

A. $34,358

B. $38,250

C. $39,209

D. $39,350

E. $51,244

Question 8

If the number of bacteria, N, present in a culture at time t minutes, is given by the equation, $N = 1500(1.08)^t$, then the time taken for the bacteria to double in size will be closest to

A.   6 minutes

B.   7 minutes

C.   8 minutes

D.   9 minutes

E.   10 minutes

Question 9

The regular quarterly repayment to repay a loan of $200,000 in twenty five years, where the interest rate of 6% is compounded quarterly is closest to

A. $1,023

B. $1,204

C. $2,665

D. $3,826

E. $3,874

End of Module 4

Module 5: Networks and decision mathematics

Before answering these questions you **must** shade the Networks and decision mathematics box on the answer sheet for multiple-choice questions

Question 1

The minimum number of edges for a graph to be connected if it has ten vertices is

A.   7

B.   8

C.   9

D.   10

E.   11

Question 2
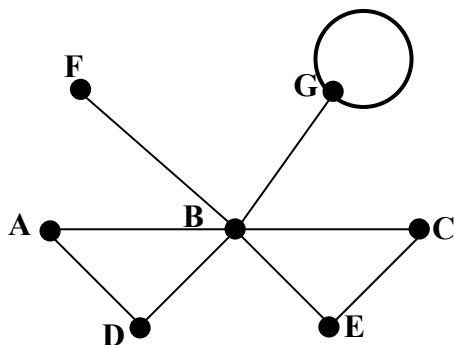
The sum of the degrees of the vertices of the above network is
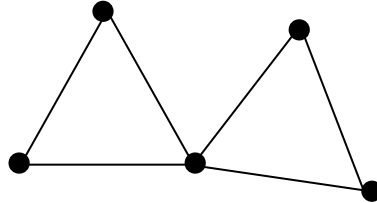
A.   15

B.   16

C.   17

D.   18

E.   19

Question 3
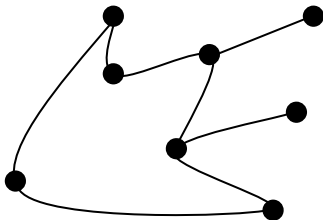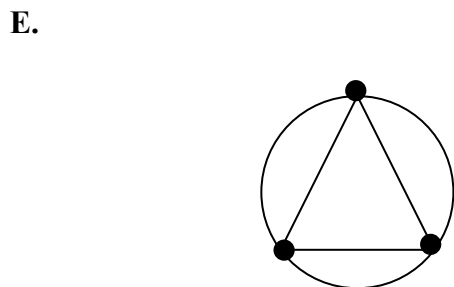
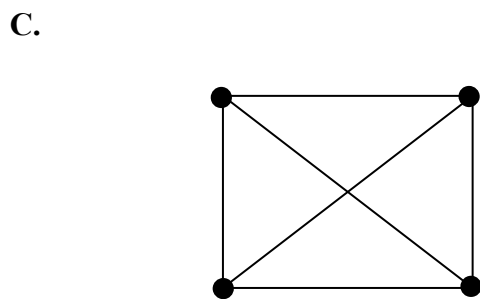Which one of the following is a Hamiltonian circuit?

A.
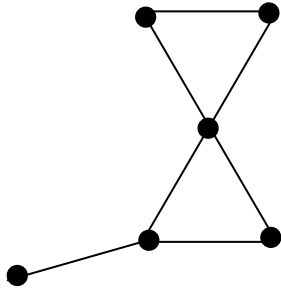
B.

C.
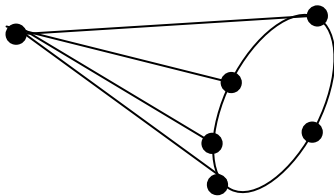
D.
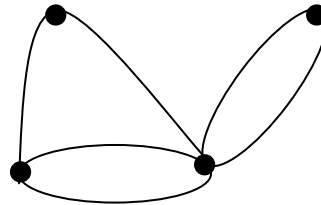
E.

Question 4

Which one of the following is a simple graph?

A.

B.

C.

D.

E.
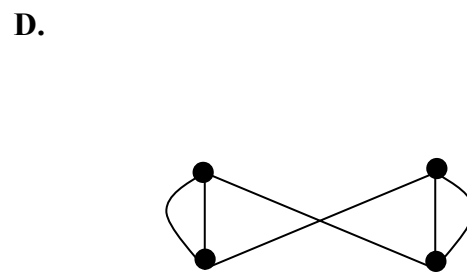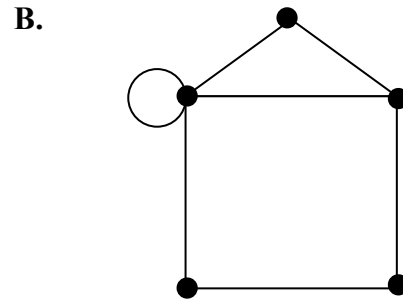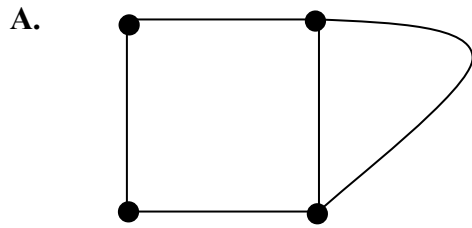
Question 5
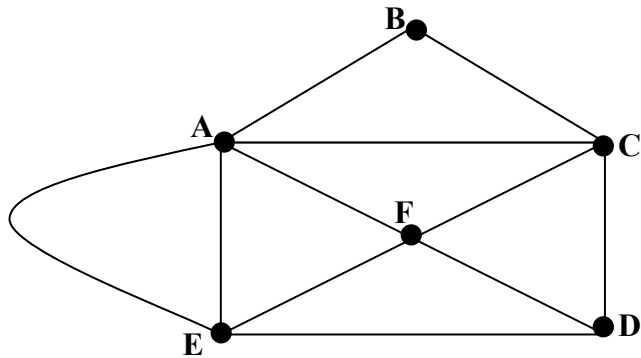
The above graph can be represented by the matrix

A.

$$
\begin{vmatrix}
1 & 1 & 1 & 0 & 2 & 1 \\
1 & 0 & 1 & 0 & 0 & 0 \\
1 & 1 & 0 & 1 & 0 & 1 \\
0 & 0 & 1 & 0 & 0 & 1 \\
2 & 0 & 0 & 1 & 0 & 1 \\
1 & 0 & 1 & 1 & 1 & 0
\end{vmatrix}
$$

B.

$$
\begin{vmatrix}
2 & 1 & 1 & 0 & 2 & 1 \\
1 & 0 & 1 & 0 & 0 & 0 \\
4 & 1 & 0 & 1 & 0 & 1 \\
0 & 0 & 1 & 0 & 1 & 1 \\
2 & 0 & 0 & 1 & 0 & 1 \\
1 & 0 & 1 & 1 & 1 & 0
\end{vmatrix}
$$

C.

$$
\begin{vmatrix}
1 & 1 & 1 & 0 & 2 & 1 \\
1 & 1 & 1 & 0 & 0 & 0 \\
1 & 1 & 1 & 1 & 0 & 1 \\
0 & 0 & 1 & 1 & 1 & 1 \\
2 & 0 & 0 & 1 & 1 & 1 \\
1 & 0 & 1 & 1 & 1 & 1
\end{vmatrix}
$$

D.

$$
\begin{vmatrix}
0 & 1 & 1 & 0 & 2 & 1 \\
1 & 0 & 1 & 0 & 0 & 0 \\
1 & 1 & 0 & 1 & 0 & 1 \\
0 & 0 & 1 & 0 & 1 & 1 \\
2 & 0 & 0 & 1 & 0 & 1 \\
1 & 0 & 1 & 1 & 1 & 0
\end{vmatrix}
$$

E.

$$
\begin{vmatrix}
5 & 1 & 1 & 0 & 2 & 1 \\
1 & 2 & 1 & 0 & 0 & 0 \\
1 & 1 & 4 & 1 & 0 & 1 \\
0 & 0 & 1 & 3 & 1 & 1 \\
2 & 0 & 0 & 1 & 4 & 1 \\
1 & 0 & 1 & 1 & 1 & 4
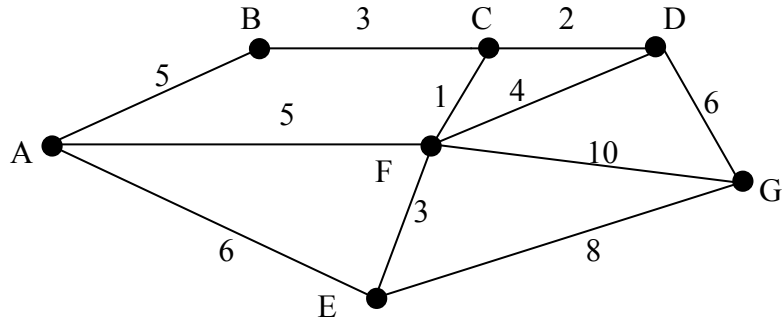\end{vmatrix}
$$

Question 6

B   3   C   2   D
5
5   1   4   6
A   10
F   G
3
6   8
E

The length of the minimum spanning tree for the above network is

A.   14

B.   15

**C.**   16

D.   18

E.   20

Question 7

Which one of the following statements is true about the critical path?

A.   The critical path helps to determine the time required to complete every activity in a project.

B.   The activities on a critical path cannot be delayed without delaying the project.

C.   To find a critical path, you only need to know the earliest start time for each activity of the project.

D.   The critical path is the shortest duration path through a network

E.   The critical path must be identified before you specify the individual activities of the project.

Question 8

**Sports People**   **Sports Played**
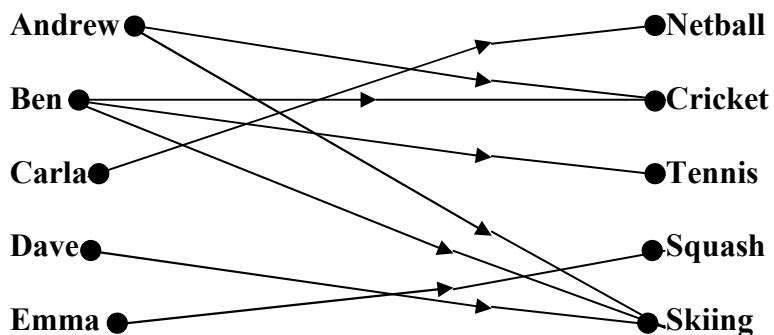
Which one of the following statements is true according to the above bipartite graph?

A.   Andrew plays more sports than Ben, Carla, Dave or Emma.

B.   More of the people listed above play tennis than play squash.

C.   Dave participates in more sports than Carla.

D.   More of the people listed above play cricket and tennis than ski.

E.   The number of the above people playing either squash, netball or tennis equals the number of the above people who ski.

Question 9

B   12   E   8   G
8   6   7   8   7
A   5
        D   3   F
     6   5   10
              C
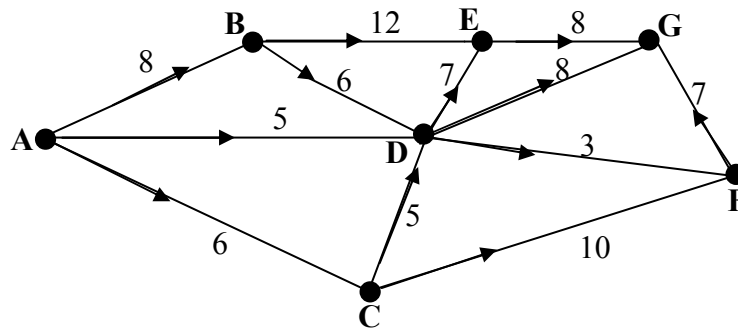
The critical path for the above network is

A.   ABDEG

B.   ADG

C.   ABDG

D.   ACDFG

E.   ACFG

End of 2005 Further Mathematics Trial Examination 1
Multiple Choice Question Book