Student Name: _____

FURTHER MATHEMATICS

Units 3 & 4 – Written examination 1

TSSM
Creating VCE Success

2007 Trial Examination

Reading Time: 15 minutes
Writing Time: 1 hour and 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	Number of marks
A	13	13			13
B	54	27	6	3	27
					Total 40

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners, and rulers, one bound reference (may be a textbook) that may be annotated (typed or handwritten), one approved graphics calculator or approved CAS calculator and if desired a scientific calculator. Calculator memory does not need to cleared.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.

Materials supplied
- Question book of 32 pages.
- Working space provided throughout the book.

Instructions
- Print your **name** in the space provided on the top of this page.
- Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.

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

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Working space

SECTION A

> **Instructions for Section A**
> Answer **all** questions.
> Choose the response that is **correct** for the question.
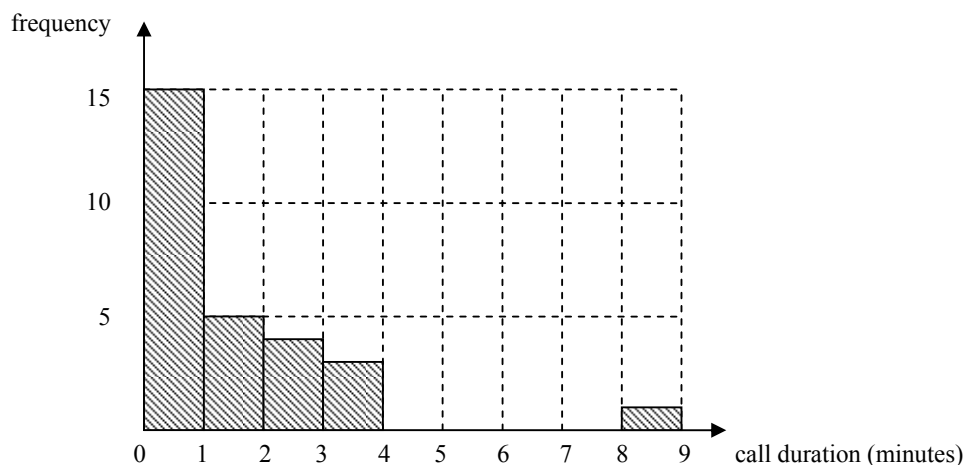> A correct answer scores 1, an incorrect answer scores 0.
> Marks will **not** be deducted for incorrect answers.
> No marks will be given if more than one answer is completed for any question.

Core – Data analysis

The following information relates to Questions 1 and 2.

This histogram shows the duration of phone calls from John's home phone last week.

Question 1
The comment which *best* describes the shape of the distribution above is
A. This distribution in negatively skewed with an outlier.
B. This distribution is reasonably symmetrical.
C. This distribution is positively skewed with an outlier.
D. This distribution is bimodal.
E. This distribution has two peaks with few calls between the peaks.

Question 2
The graph represents 28 phone calls. The mean, in minutes, of these phone calls is closest to
A.   1.6
B.   2.1
C.   5.6
D.   8.8
E. 11.6

Question 3
The heights of women aged between 20 and 49 years are known to be approximately normally distributed with a mean of 162.5 cm and a standard deviation of 6.9 cm.
What percentage of women are shorter than 148.7 cm tall?
A. 0.15%
B.   2.5%
C. 13.5%
D. 47.5%
E. 97.5%

The following information relates to Questions 4 and 5.

The following two-way frequency table shows the sales of diet soft drinks versus full sugar soft drinks from a corner store according to gender.

Types of Soft drink	Gender	
	Female	**Male**
Sugar drink	14	52
Diet drink	78	26

Question 4
The independent and dependent variables (in order) are
A. Type of soft drink and Gender.
B. Female and Male.
C. Sugar drink and Diet drink.
D. Gender and Type of soft drink.
E. Male and Female.

Question 5
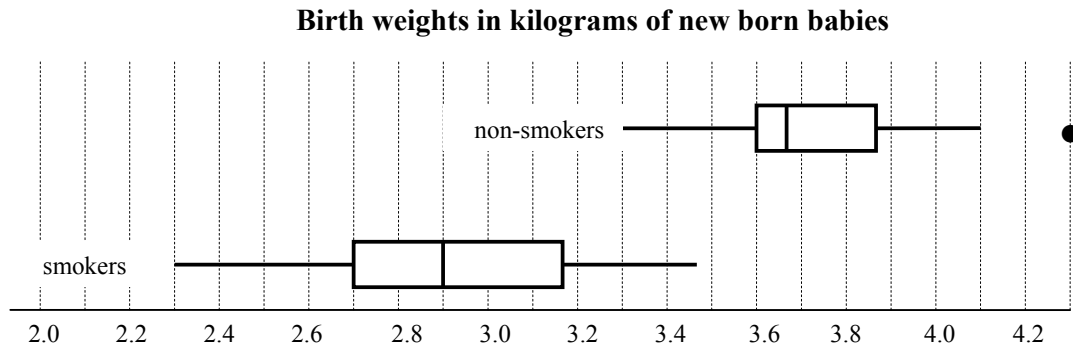The percentage of Females who purchased sugar drink is closest to
A.   8%
B. 15%
C. 21%
D. 79%
E. 85%

The following information relates to Questions 6 and 7.

A comparison of the birth weights of babies from smoking and non-smoking mothers is given in the box plot below.

Birth weights in kilograms of new born babies

Question 6
Which one of the following statements can be inferred from the information above?
A. Compared with the babies of smoking mothers, the babies of non-smoking mothers have fewer birth defects.
B. There were more non-smoking mothers sampled than smoking mothers.
C. The birth weights of babies of non-smoking mothers are evenly distributed.
D. The mean of the birth weight for babies whose mothers smoke is $2.9kg$.
E. There is greater variability in the birth weights of babies whose mothers smoke compared to those whose mothers do not smoke.

Question 7
The dot on the far right hand side of the graph represents
A. A mistake made by the person who drew up the graph.
B. A birth weight 1.5 times greater than the median of the non-smokers baby weights.
C. A baby whose data was provided too late to be included.
D. A baby whose weight was greater than $Q_3 + IQR$ for non-smokers.
E. $Q_3 + 1.5 \times 0.26$ for the babies of mothers who do not smoke.

Question 8
The quarterly sales figures for a fabric shop (in thousands of dollars) have been recorded over a two year period.

Time	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring
Sales ($'000)	35	42	15	19	32	46	20	25

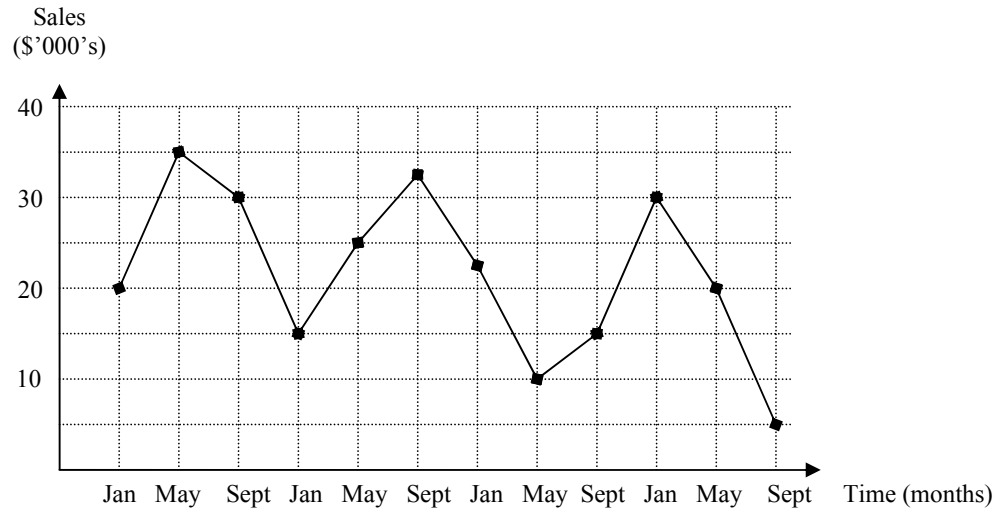Three point median smoothing was carried out. The results are closest to
A. 28
B. 35
C. 27,26,26,26,29
D. 31,25,22,32,33,30
E. 35,19,19,32,32,25

Question 9

Sales of jewellery ($'000's) over a 4 year period is shown below:

The information on this graph shows

A. a positive secular trend

B. a negative secular trend

C. a negative seasonal trend

D. a negative cyclic trend

E. random variation.

Question 10

The sales of a certain brand of toothpaste from our local supermarket for each year from 2000 to 2006 are given in the table below.

Year	2000	2001	2002	2003	2004	2005	2006
Sales	200	250	235	348	312	280	320

The equation for the three median regression line is closest to

A. $y = 15 + 219x$

B. $y = 18 + 207x$

C. $y = 207 + 18x$

D. $y = 219 + 15x$

E. $y = 29766 + 15x$

SECTION A – continued
TURN OVER

Question 11

The quarterly sales (in thousands of dollars) and the seasonal indices for a certain company are shown in the table.

Quarter	Q_1	Q_2	Q_3	Q_4
Sales ($'000)	45	68	37	92
Seasonal Index	0.85	?	0.62	1.34

The value of the seasonal index for the second quarter is closest to

A. 0.61

B. 0.94

C. 1.19

D. 1.28

E. Unable to be determined

Question 12

From a scatterplot of deseasonalised data of sales (in thousands of dollars) in 2006 a least squares regression line is fitted. It is found to have the equation $y = -1.4t + 22.8$. Some of the seasonal indices for 2006 are given in the table.

Quarter	Q_1	Q_2	Q_3	Q_4
Seasonal Index	0.72	1.68		

Assuming $t = 1$ is Quarter 1 of 2006, a prediction of the sales in the first quarter of 2007 using this information is closest to

A. $11.38

B. $15.80

C. $11376

D. $15800

E. $21944

Question 13

For a set of bivariate data, involving variables x and y

$$r = 0.8054, \quad \bar{x} = 31.4, \quad \bar{y} = 6.5, \quad s_x = 14.3, \quad and \quad s_y = 3.3$$

The equation of the least squares regression line $y = a + bx$ is closest to

A. $y = 0.2 + 0.34x$

B. $y = 0.34 + 0.2x$

C. $y = 0.66 + 0.19x$

D. $y = 0.19 + 0.8x$

E. $y = 3.2 + 17.1x$

END OF SECTION A

SECTION B

Instructions for Section B
Select **three** modules and answer **all** questions.
Choose the response that is **correct** for the question.
A correct answer scores 1, an incorrect answer scores 0.
Marks will **not** be deducted for incorrect answers.
No marks will be given if more than one answer is completed for any question.

Module 1: Number patterns

Question 1
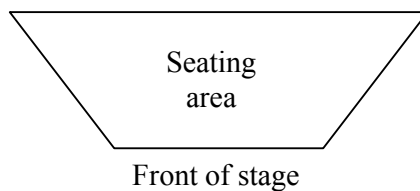For the arithmetic sequence 19, 15, 11, 7, 3, …
The common difference d is
A. -4
B. -1
C. 1
D. 4
E. 19

Question 2
The second term of an arithmetic sequence, $t_2 = 5$ and the fifth term of the sequence, $t_5 = 32$
The first three terms of the sequence are
A. -4, 5, 14
B. 4, 5, 6
C. 5, 14, 23
D. 9, 5, 1
E. 32, 23, 14

Question 3

A local theatre is shaped like a trapezium. There are 12 rows of seats making up a total of 258 seats. The number of seats in each row increases by the same number each time. If there are 14 seats in the fourth row, the number of seats in the first row is
A. 3
B. 5
C. 10
D. 12
E. 38

Question 4
The sum to infinity of the series $1, -\frac{2}{3}, \frac{4}{9}, -\frac{8}{27}.....$ is

A. $-\frac{2}{3}$

B. $\frac{2}{3}$

C. $\frac{3}{5}$

D. 1

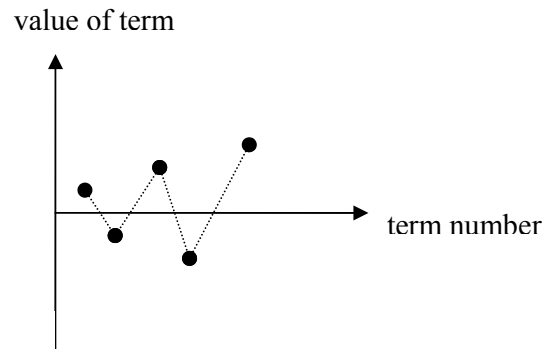E. 3

SECTION B - Module 1: Number patterns - continued

Question 5

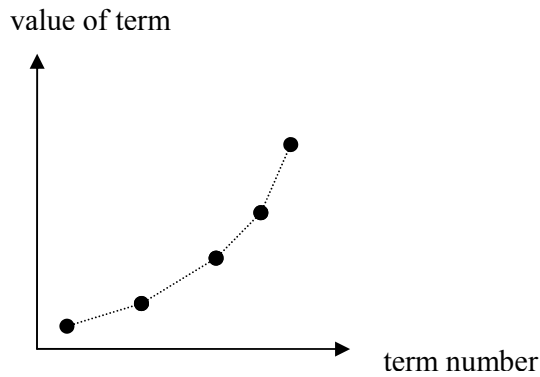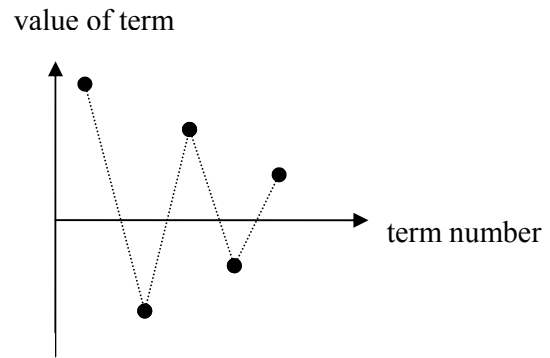For a geometric sequence where $a = 2,\ r = -0.5$, the graph that most closely matches this sequence is

A.

value of term

term number

B.

value of term

term number

C.

value of term

term number

D.

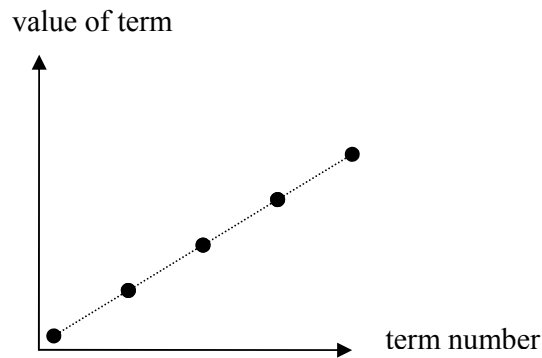value of term

term number

E.

value of term

term number
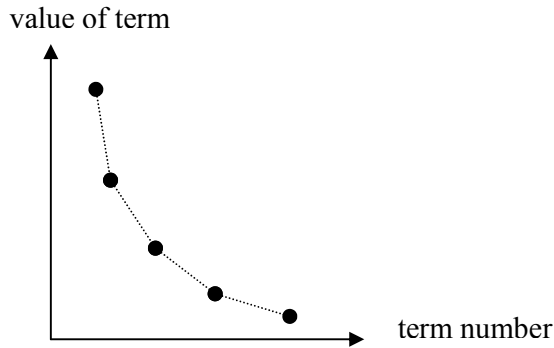
SECTION B - Module 1: Number patterns - continued
TURN OVER

Question 6

A difference equation is defined by $t_{n+1} = 5t_n - 1$ where $t_1 = -2$.

t_3 has a value of

A. 219

B. 44

C. -11

D. -56

E. -281

Question 7

A graphic designer has a computer system worth $25000. For taxation purposes he depreciates it at a rate of 35%.

If D_n is the value of the computer system after n years of depreciation, a difference equation describing this situation is

A. $D_n = -0.35D_{n-1}$ where $D_0 = 25000$

B. $D_n = 0.65D_{n-1}$ where $D_0 = 25000$

C. $D_n = 1.35D_{n-1}$ where $D_0 = 25000$

D. $D_n = D_{n-1} + 0.35$ where $D_0 = 25000$

E. $D_n = D_{n-1} - 0.35$ where $D_0 = 25000$

Question 8

The difference equation $T_{n+1} = 4T_n - 3$, $\quad T_1 = 120$ generates

A. An increasing arithmetic sequence.

B. A decreasing arithmetic sequence.

C. An increasing geometric sequence.

D. A decreasing geometric sequence.

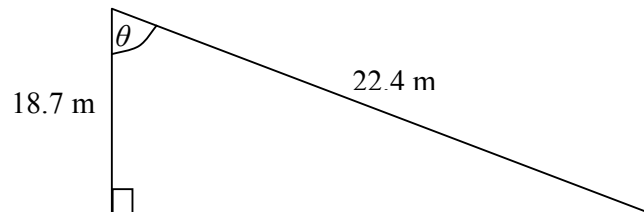**E.** Neither an arithmetic nor a geometric sequence.

Question 9

The fourth term in the sequence generated by the difference equation

$t_{n+2} = 3t_{n+1} - 2t_n$, $\quad where \quad t_1 = 1, \quad t_2 = 2 \quad$ is

A. -2

B. 1

C. 8

D. 10

E. 28

Module 2: Geometry and trigonometry

Question 1

For the triangle shown, the size of the angle θ is closest to

A. 33°
B. 40°
C. 45°
D. 50°
E. 57°

Question 2
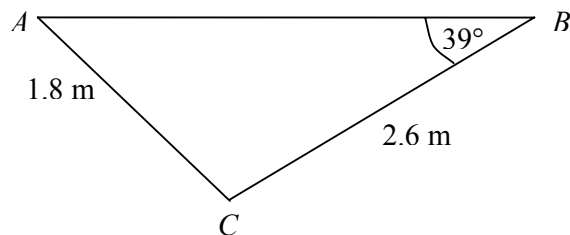
The size of angle $\angle ACB$ is closest to

A. 20°
B. 51°
C. 65°
D. 76°
E. 115°

SECTION B - Module 2: Geometry and trigonometry - continued
TURN OVER

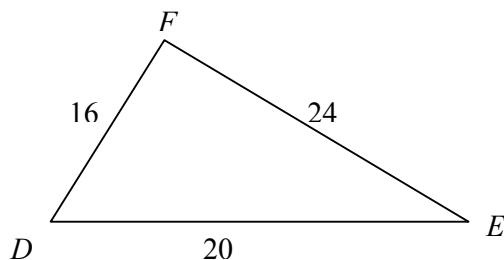**Question 3**
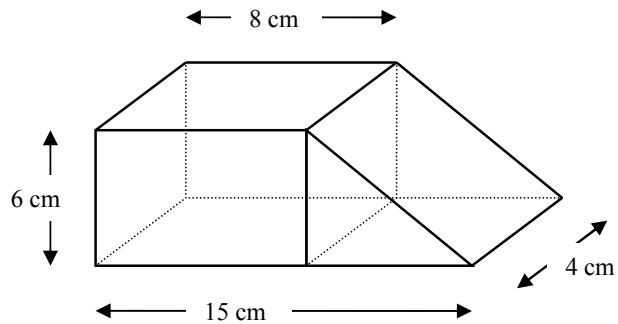
For the shape shown, the volume is closest to
A.   84 cm^3
B. 168 cm^3
C. 192 cm^3
D. 276 cm^3
E. 360 cm^3

Question 4
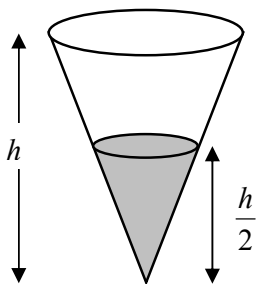
An inverted right cone has been filled to half its depth with water. If the volume of the water in the cone is 60 cm^3, then the capacity of the cone is closest to
A. 600 cm^3
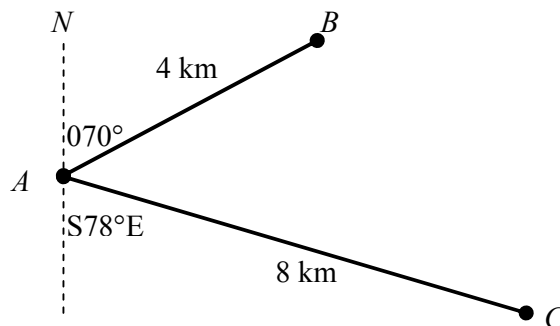B. 480 cm^3
C. 360 cm^3
D. 240 cm^3
E. 120 cm^3

SECTION B- Module 2: Geometry and trigonometry- continued

Question 5

Using the information given, the area of triangle *DEF* is found by

A. $\frac{1}{3}(24+20+16)$

B. $\frac{1}{2}(24+20+16)$

C. $\sqrt{(30(30-24)(30-20)(30-16))}$

D. $\sqrt{(60(60-24)(60-20)(60-16))}$

E. $\frac{1}{2} \times 24 \times 16 \times \sin D$

The following information relates to Questions 6 and 7.

Three islands, *A, B* and *C* are shown on the map above. The distances of *B* and *C* from *A* and their bearings have been indicated on the diagram.

Question 6
The distance between islands *B* and *C* is closest to
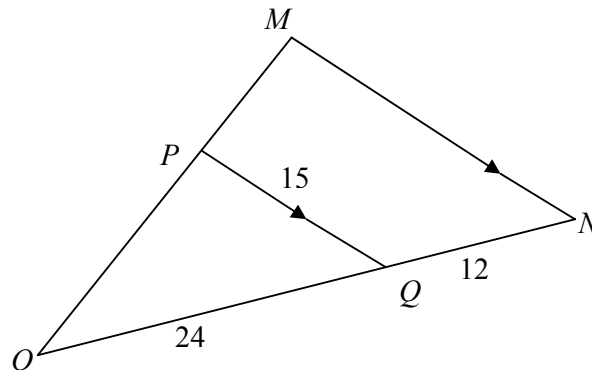**A.** 5 km
B. 8 km
C. 12 km
D. 16 km
E. 25 km

SECTION B - Module 2: Geometry and trigonometry - continued
TURN OVER

Question 7
The bearing of *C* from *B* is closest to
A. 028°
B. 058°
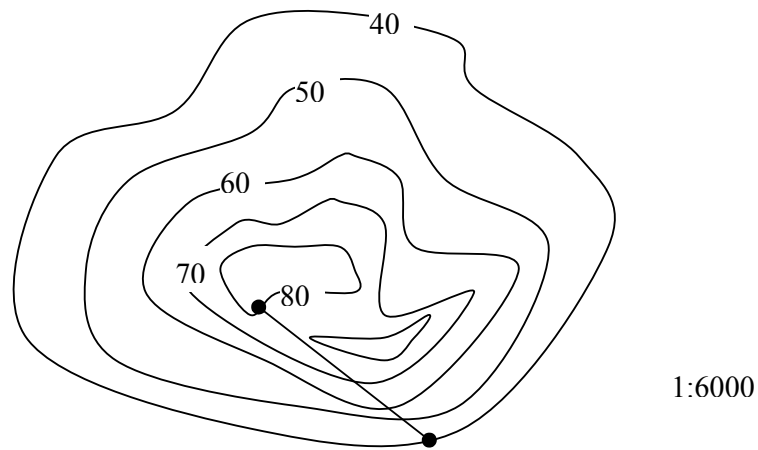**C.** 078°
D. 122°
E. 125°

Question 8

In the diagram, *PQ* = 15 cm, *OQ* = 24 cm and *QN* = 12 cm. Line segments *PQ* and *MN* are parallel. The length *MN* is closest to
A.   7.5 cm
B. 19.2 cm
C. 22.5 cm
D.   30 cm
E. 57.6 cm

SECTION B- continued

Question 9

The contour map has contours marked every 10 metres and a scale of 1:6000. The marked line interval represents a straight section of waterpipe. If the length of the line interval on the map is 3cm, the actual length of the pipe is closest to

A. 18 m
B. 40 m
C. 175 m
D. 184 m
E. 1800 m

Module 3: Graphs and relations

Question 1
For the line with equation $y = 2x - 5$ which of the following statements is true?
A. The line passes through the point 2 on the *y*-axis.
B. The line passes through the point 5 on the *y*-axis.
C. The line passes through the point -2 on the *x*-axis.
D. The line passes through the point -5 on the *x*-axis.
E. The line passes through the point -5 on the *y*-axis.

The following information relates to Questions 2 and 3.
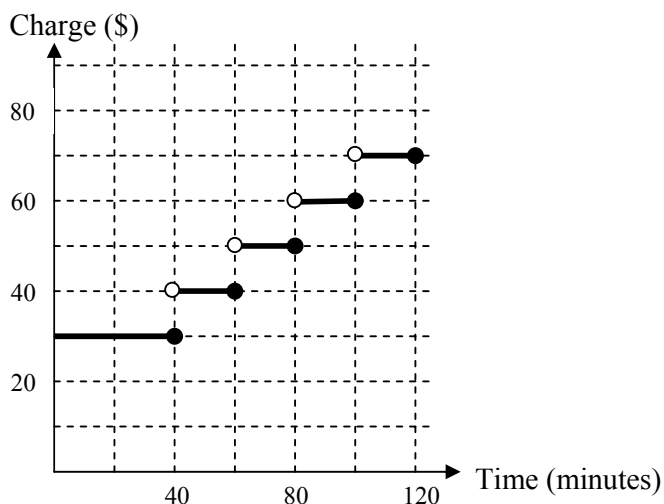
This graph shows the charges verses time for Nigel the house cleaner. Nigel charges $30 for the first 40 minutes and then $10 for each subsequent 20 minutes or part thereof, per visit.

Question 2
Nettie has broken her leg. She has asked Nigel to clean her house every day, five days a week for six weeks. She has decided to ask Nigel to work for 90 minutes each day.

The total amount Nettie will have to pay over this time period is
A. $60
B. $300
C. $360
D. $1800
E. $2520

Question 3

Nigel actually works different times each day in Nettie's home. On Mondays and Fridays Nigel works for 60 minutes. On Wednesdays Nigel works for 90 minutes and on Tuesdays and Thursdays Nigel works 120 minutes. How much should Nigel actually charge Nettie for the six weeks work?

A. $40

B. $70

C. $280

D. $1680

E. $1800

Question 4

Distance (km)
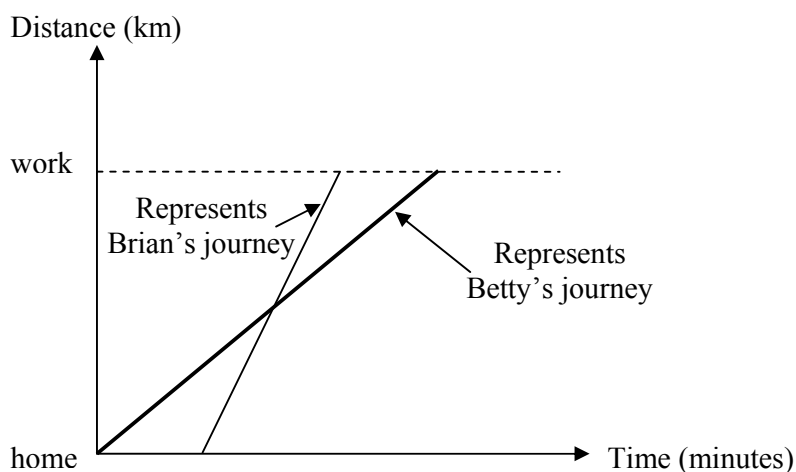
This graph represents the journeys of Betty and Brian from their home to their work. The statement which best matches the graph is

A. Brian had a head start.

B. Betty travelled faster than Brian.

C. Betty arrived at work first.

D. Both Betty and Brian arrived at work together.

E. Brian passed Betty on their way to work.

Question 5

For the graph with the equation $2x + 3y \geq 8$ which of the following points is a solution to this graph?

A. $(4, -1)$

B. $(3, 1)$

C. $(2, 1)$

D. $(1, -1)$

E. $(0, 2)$

SECTION B - Module 3: Graphs and relations - continued
TURN OVER

The following information relates to Questions 6, 7 and 8.
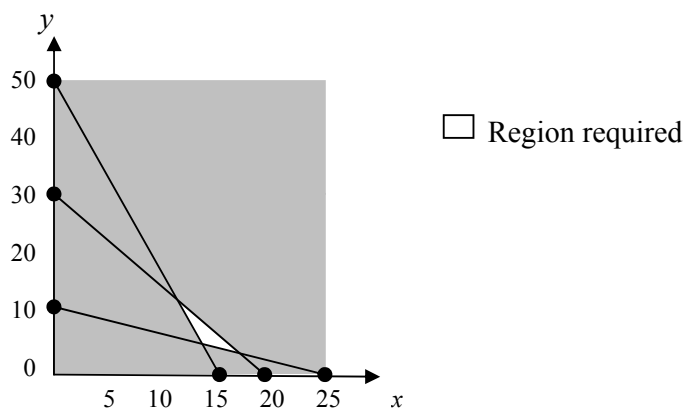
The above graph shows the regions for a linear programming problem in a flower farm.
x represents the number of daffodils produced on the farm.
y represents the number of tulips produced.

Question 6
Which of the following series of equations is correctly depicted on the graph?

A.
$3x + 2y \geq 60$
$2x + 5y \leq 50$
$10x + 3y \leq 150$

B.
$15x \leq 50y$
$20x \geq 30y$
$25x \leq 10y$

C.
$15x \geq 50y$
$20x \leq 30y$
$25x \geq 10y$

D.
$3x + 2y \leq 60$
$2x + 5y \geq 50$
$10x + 3y \geq 150$

E.
$3x + 2y \geq 60$
$2x + 5y \geq 50$
$10x + 3y \geq 150$

Question 7
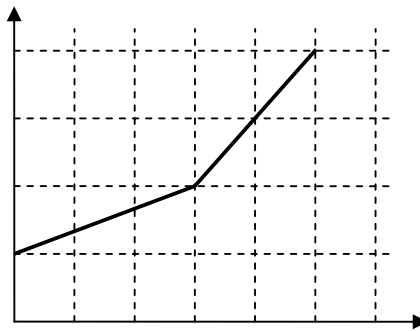
The vertices of the solution region are closest to

A. $(15,50),(20,30),(25,10)$

B. $(11,14),(14,5),(18,3)$

C. $(50,15),(30,20),(10,25)$

D. $(14,11),(4,14),(3,18)$

E. $(25,0),(25,50),(0,50)$

Question 8

The profit equation for the flower farm is given by $P = x + 2y$. Given the constraints, the profit obtained could be maximised to

A. $22

B. $24

C. $39

D. $80

E. $125

Question 9

Which of the following rules would best describe the graph shown?

A.
$$y = 3x + 2 \quad 0 \le x < 6$$
$$y = x - 2 \quad 6 \le x \le 10$$

B.
$$3y = x + 6 \quad 0 \le x \le 6$$
$$y = x - 2 \quad 6 \le x \le 10$$

C.
$$3y = 2x + 6 \quad 0 < x \le 6$$
$$y = x - 2 \quad 6 < x \le 10$$

D.
$$y = 2x + 2 \quad 0 \le x < 6$$
$$3y = x - 6 \quad 6 \le x < 10$$

E.
$$3y = 2x + 6 \quad 0 \le x < 6$$
$$3y = x - 6 \quad 6 \le x < 10$$

SECTION B- continued
TURN OVER

Module 4: Business-related mathematics

Question 1
Pat invested $7500 in an investment account at a simple interest rate of 6.25% per annum for a period of 6 years.
The amount of interest earned over the six years is
A. $468.75
B. $2812.50
C. $7500
D. $7968.75
E. $10312.50

Question 2
Paulo invests $7500 in an investment account at a rate of 4.35% compounded quarterly for a period of 6 years.
The amount of interest earned over the six years is closest to
A. $2183
B. $2223
C. $9683
D. $9723
E. $13339

Question 3
A computer purchased for $6400 has a book value of $3800 after two years. The annual flat rate of depreciation applied is closest to
A. 20%
B. 34%
C. 40%
D. 59%
E. 68%

Question 4
Pieter has a company car. It was bought for $42990 and depreciates at a rate of 32 cents per kilometre. In its first year Pieter travels 22 340 km and in his second year he travels 28 480 km. The amount that the car has depreciated in the 2 years is closest to
A. $7150
B. $9110
C. $13760
D. $16260
E. $26730

Question 5

Pamela takes out a reducing balance loan of $48 000. She is charged 7.8% per annum interest. She makes monthly repayments of $350. The amount still owing after the first repayment is closest to:

A. $50460

B. $48660

C. $48260

D. $47960

E. $46660

SECTION B - Module 4: Business-related mathematics - continued
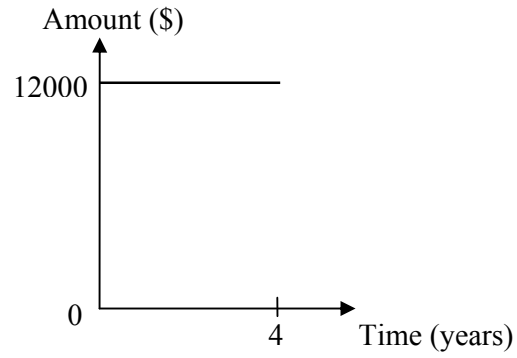
TURN OVER

Question 6

Patrice is repaying a reducing balance loan of $12000. 7.5% per annum interest is being repaid with fortnightly payments of $120. Which of the following graphs best illustrates the amount owing on this loan in 4 years?
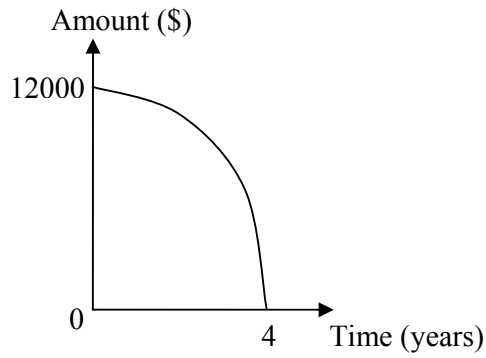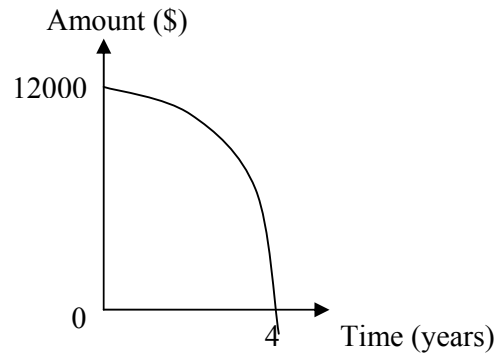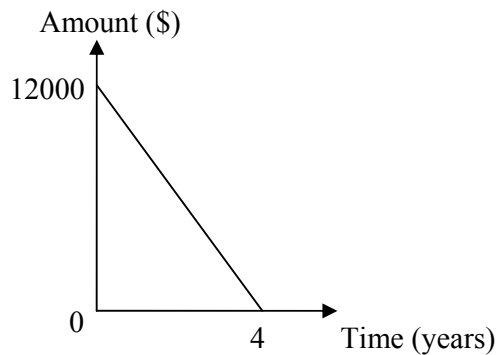
A.

B.

C.

D.

E.

SECTION B - Module 4: Business-related mathematics - continued
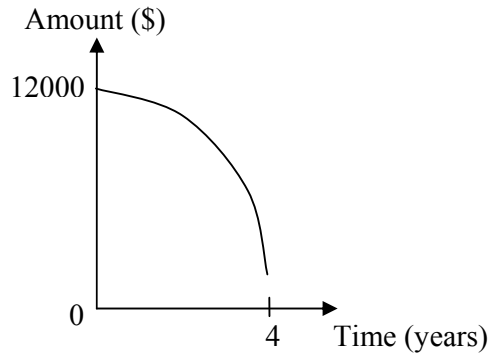
Question 7
Phillip deposits $10 a week for a period of 4 years in an account which pays 3.5% per annum interest compounded weekly. He initially invested $150 into the account.
The amount in the account at the end of the four years is closest to:
A. $2080
B. $2230
C. $2404
D. $2308
E. $2153

The following information relates to Questions 8 and 9.

Prue buys an i-pod priced at $458 under a hire-purchase scheme. She pays a deposit of $60.
She wants to pay for the i-pod in weekly instalments over a 12 week period.

Question 8
If the effective interest rate is 24.5%, Prue's weekly repayments are closest to
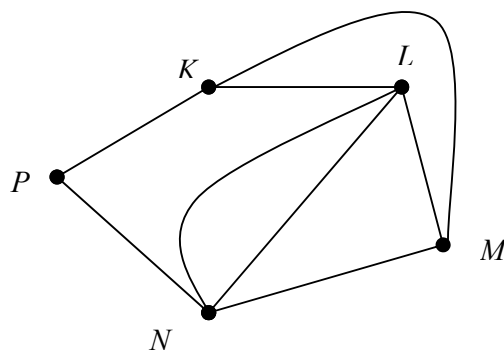A. $33.17
B. $38.17
C. $34.18
D. $165.17
E. $47.52

Question 9
A different hire purchase agreement offers Prue a flat rate of interest of 15%. How much more would Prue pay for her i-pod using this new agreement than her original agreement?
A. $3.20
B. $1.59
C. $27.70
D. $42.35
E. $555.50

**SECTION B**- continued
TURN OVER

Module 5: Network and decision mathematics

Question 1

For the network *KLMNP* which of the following statements is true?
A. An Euler circuit is possible for this network.
B. An Euler path is possible for this network if you start at *P*.
C. An Euler path is possible for this network if you start at *K*.
D. An Euler path is possible for this network if you start at *N*.
E. A Hamiltonian circuit is not possible for this network.

Question 2
Five people who live in Mary's street all love making muffins. Each has at least one speciality. The following bipartite graph indicates the specialities of the five bakers.
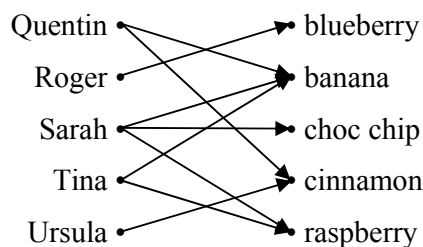
Who should bake each type of muffin in order to ensure that all types of muffins are baked and each person bakes one of their specialties?
A. Quentin – banana, Roger – blueberry, Sarah – choc chip, Tina – cinnamon, Ursula – raspberry
B. Quentin – blueberry, Roger – banana, Sarah – choc chip, Tina – cinnamon, Ursula – raspberry
C. Quentin – banana, Roger – blueberry, Sarah – choc chip, Tina – raspberry, Ursula – cinnamon
D. Quentin – cinnamon, Roger – blueberry, Sarah – raspberry, Tina – banana, Ursula – cinnamon
E. Quentin – raspberry, Roger – cinnamon, Sarah – banana, Tina – choc chip, Ursula – blueberry

SECTION B - Module 5: Networks and decision mathematics - continued

Question 3
Four job applicants are rated out of 10 by the staffing officer after their interviews for four different positions. 1 is the worst rating and 10 is the best rating. Who should be allocated to which position?

Applicant \ position	Sales	Phones	Administration	Retail
Alan	3	1	3	7
Betty	3	6	6	5
Calum	7	2	9	5
Deana	5	4	6	6

A. Alan – sales, Betty – phones, Calum – administration, Deana – retail
B. Alan – administration, Betty – sales, Calum – phones, Deana – retail
C. Alan – phones, Betty – retail, Calum – sales, Deana – administration
D. Alan – retail, Betty – phones, Calum – sales, Deana – administration
E. Alan – retail, Betty – phones, Calum – administration, Deana – sales

Question 4
A connected graph with 12 edges divides a plane into 9 regions. How many vertices does this graph have?
A. 3
B. 5
C. 7
D. 9
E. 12

Question 5
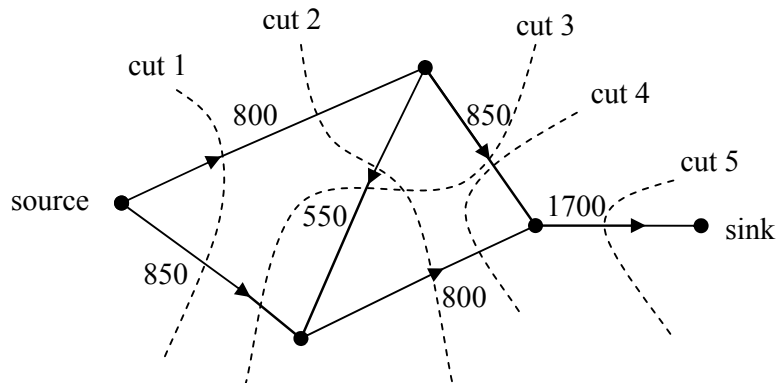
The maximum flow in this network can be found using
A. cut 1
B. cut 2
C. cut 3
D. cut 4
E. cut 5

SECTION B - Module 5: Networks and decision mathematics - continued
TURN OVER

The following information relates to Questions 6, 7, 8 and 9.
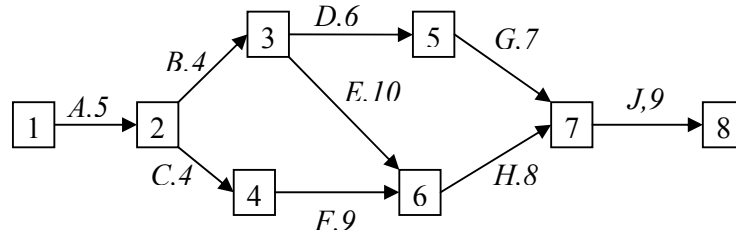
The network below shows the activities and their completion times (in days) that are needed to complete a project.

Question 6
The immediate predecessors of activity *H* are
A. *ABCEF*
B. 12346
C. *EF*
D. *J*
E. 6

Question 7
The shortest possible project time is given by
A. 61 days
B. 36 days
C. 33 days
D. 26 days
E. 5 days

Question 8
The latest possible start time for activity *G* is
A. 5 days
B. 15 days
C. 20 days
D. 22 days
E. 27 days

Question 9
Due to a maintenance problem activity *D* has been delayed by 4 days. The shortest project time allowing for this delay is
A. 65 days
B. 61 days
C. 40 days
D. 36 days
E. 35 days

SECTION B- continued

Module 6: Matrices

The following information relates to Questions 1, 2 and 3.

$$A = \begin{bmatrix} 6 & 2 \\ 4 & 3 \end{bmatrix} \quad B = \begin{bmatrix} 30 & -8 \\ 25 & -7 \end{bmatrix} \quad C = \begin{bmatrix} 4 & -1 \\ 3 & -1 \end{bmatrix} \quad D = \begin{bmatrix} 21 & -14 \\ -7 & 7 \end{bmatrix} \quad E = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

Question 1

Which of the matrices above is equivalent to the matrix $7\begin{bmatrix} 3 & -2 \\ -1 & 1 \end{bmatrix}$?

A. *A*
B. *B*
C. *C*
D. *D*
E. *E*

Question 2

Which of the following matrix equations is correct?
A. $AC = B$
B. $CA = B$
C. $AB = C$
D. $CB = A$
E. $BA = C$

Question 3

What is the determinant of matrix *C*?
A. undefined
B. 1
C. Matrix *C*
D. −1
E. Matrix *E*

Question 4
Consider the following sets of simultaneous equations.

$x = 6$	$x - 2y = 4$	$x + y = -2$	$x - y = 0$	$6x - 3y = 9$
$y = -2$	$y = 0.5x - 2$	$2x + y = 5$	$y = 0$	$2x - y = 3$

How many of these have a unique solution?
A. 1
B. 2
C. 3
D. 4
E. 5

Question 5

$$\begin{array}{c} \\ S \\ A \end{array} \begin{array}{cc} S & A \\ \begin{bmatrix} 0.7 & 0.4 \\ 0.3 & 0.6 \end{bmatrix} \end{array}$$ is a transition matrix showing the purchasing patterns of the two daily

newspapers; The Standard and The Argus.

Which of the following statements is false?
A. 70% of people will continue to purchase The Standard.
B. 40% of people who purchased The Standard will change to The Argus.
C. 60% of people who purchased The Argus will continue to do so.
D. 30% of people who purchased The Standard will change to The Argus.
E. It is impossible to tell the proportion of people who will change their paper.

SECTION B - Module 6: Matrices - continued

The following information relates to Questions 6, 7, 8 and 9.

The Manager of the Chocolate Lovers Club has been keeping records of the purchases in its club room canteen. She has noticed that 60% of customers purchase Venus chocolate bars and the remainder purchase Giggles chocolate bars. The Venus Company has started extensive advertising in the hope that 30% of those that currently purchase Giggles will change to Venus. Market trends also show that 5% of those who purchase Venus will change to Giggles despite the campaign.

Question 6
The transition matrix for this situation would be

A. $\begin{bmatrix} 0.3 \\ 0.5 \end{bmatrix}$

B. $\begin{bmatrix} 0.6 \\ 0.4 \end{bmatrix}$

C. $\begin{bmatrix} 0.6 \\ 0.3 \end{bmatrix}$

D. $\begin{bmatrix} 0.6 & 0.3 \\ 0.05 & 0.95 \end{bmatrix}$

E. $\begin{bmatrix} 0.95 & 0.3 \\ 0.05 & 0.7 \end{bmatrix}$

Question 7
The initial state matrix would be

A. $\begin{bmatrix} 0.3 \\ 0.5 \end{bmatrix}$

B. $\begin{bmatrix} 0.6 \\ 0.4 \end{bmatrix}$

C. $\begin{bmatrix} 0.6 & 0.3 \end{bmatrix}$

D. $\begin{bmatrix} 0.95 & 0.3 \\ 0.05 & 0.7 \end{bmatrix}$

E. $\begin{bmatrix} 0.3 & 0.6 \\ 0.7 & 0.4 \end{bmatrix}$

SECTION B - Module 6: Matrices - continued
TURN OVER

Question 8
If this trend continues, then the weekly sales of Venus bars in three weeks time would be closest to
A. 21%
B. 75%
C. 78%
D. 79%
E. 81%

Question 9
The company has decided to halt the advertising campaign when the proportion of Venus bar sales reaches 82.7%. The number of weeks the campaign should run is closest to
A. 1
B. 3
C. 5
D. 7
E. 9

END OF QUESTION BOOK