THE HEFFERNAN GROUP

P.O. Box 1180
Surrey Hills North VIC 3127
ABN 20 607 374 020
Phone 9836 5021
Fax 9836 5025

Student Name……

FURTHER MATHEMATICS

TRIAL EXAMINATION 1

(FACTS, SKILLS AND APPLICATIONS)

2003

Reading Time: 15 minutes
Writing time: 90 minutes

Instructions to students

This exam consists of Section A and Section B.
Section A contains 13 multiple-choice questions from the core, "Data Analysis".
Section A is compulsory and is worth 13 marks.
Section B consists of 5 modules each containing 9 multiple-choice questions. You should choose 3 of these modules and answer every question in each of your chosen modules.
Each of the modules is worth 9 marks.
Section B begins on page 10 of this exam.
There is a total of 40 marks available for this exam.
Students may bring up to two A4 pages of pre-written notes into the exam.
An answer sheet appears on page 34 of this exam.

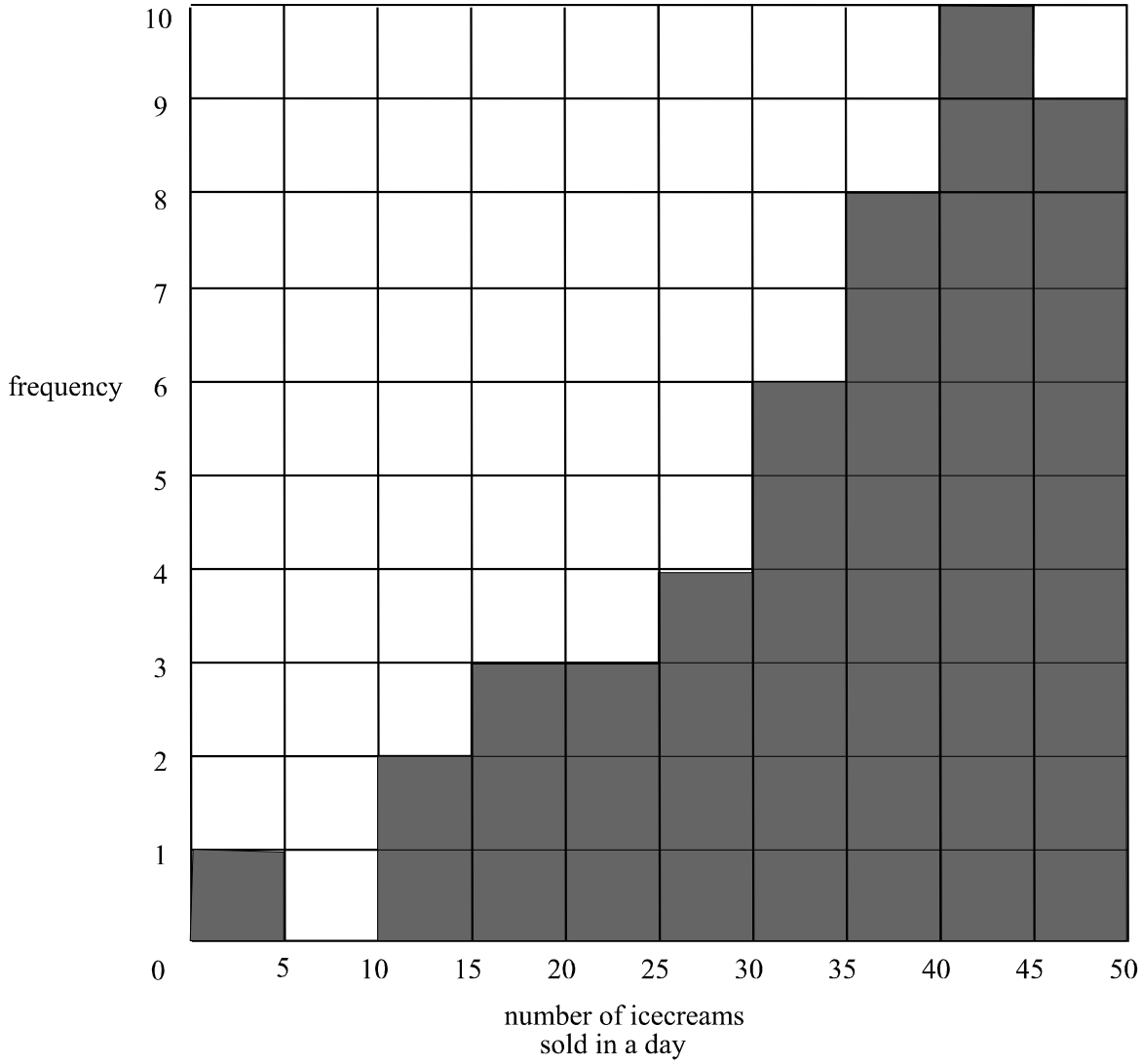
This paper has been prepared independently of the Victorian Curriculum and Assessment Authority to provide additional exam preparation for students. Although references have been reproduced with permission of the Victorian Curriculum and Assessment Authority, the publication is in no way connected with or endorsed by the Victorian Curriculum and Assessment Authority.

Section A

Core

All questions must be answered.

The following information relates to questions 1 – 3



The number of ice creams sold at a milk bar per day is recorded over a number of days and is displayed on the histogram above.

Question 1

For how many days was the data recorded?

A. 10
B. 46
C. 50
D. 982
E. 1720

Question 2

The median number of ice creams sold in a day is somewhere in the range

A. 20 –25
B. 25 –30
C. 30 – 35
D. 35 – 40
E. 40 - 45

Question 3

The 68 – 95 – 99.7% rule would not be appropriate to apply to this set of data because the distribution

A. has an outlier
B. has no standard deviation
C. is not bell shaped
D. is not sufficiently skewed
E. has no data in the 5 – 10 range

Question 4

The number of cars through a drive-through take away food store over 15 days is displayed in the ordered stemplot below.

3	8			
4	1	7		
5	5	7		
6	2	8	9	
7	2	4	5	8
8	0	3	6	

The standard deviation of the number of cars through this drive-through is closest to

A. 15
B. 17
C. 27
D. 66
E. 69

The information below relates to Questions 5 and 6.

A survey involved 780 people who were full time workers and had a loan with a bank. Information regarding the age bracket of the person and the type of bank loan they had was sought. The data that was collected is shown in the table below.

Type of bank loan	**Age Bracket**	
	30 and under	Over 30
Personal	179	84
Car	116	92
Housing	61	185
Business	27	36
Total	383	397

Question 5

Of those people aged 30 and under who were surveyed, the percentage who had taken out a car loan was closest to

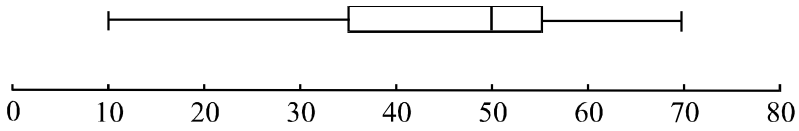
A. 14.9%
B. 23.2%
C. 24%
D. 26.7%
E. 30.3%

Question 6

After analyzing the data from the survey Tom argued that the type of bank loan people take out is associated with the age bracket of the person. Which of the following pieces of analysis of the data supports Tom's argument?

A. 47% of people 30 and under compared to 21% of people over 30 had a personal loan
B. 60% of people interviewed had a personal loan or a car loan.
C. 47% of people over 30 had a housing loan.
D. 49% of people surveyed were 30 and under.
E. 70% of people over 30 had a housing or a car loan.

Question 7



For the box and whisker shown above the range, interquartile range and median of the data are given respectively by

	range	interquartile range	median
A.	20	20	40
B.	20	60	50
C.	45	50	20
D.	60	20	50
E.	60	50	20

Question 8

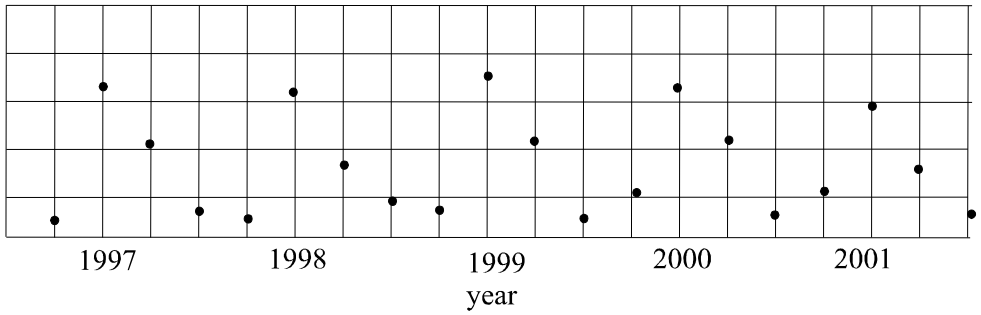
The distribution of cholesterol levels of a large group of sports people is approximately bell-shaped with a mean of 4.8 and a standard deviation of 0.7. The percentage of sports people in this group with a cholesterol level less than 3.4 is closest to

A. 0.05%
B. 2.5%
C. 5%
D. 17%
E. 34%

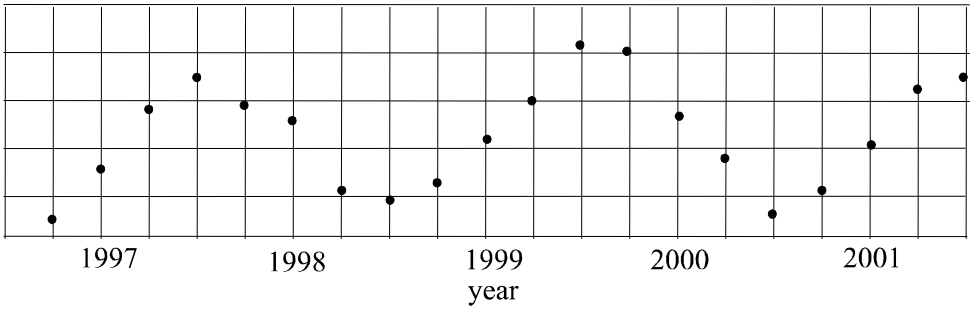
Question 9

Which one of the following time series plots shows a cyclical but not seasonal pattern?

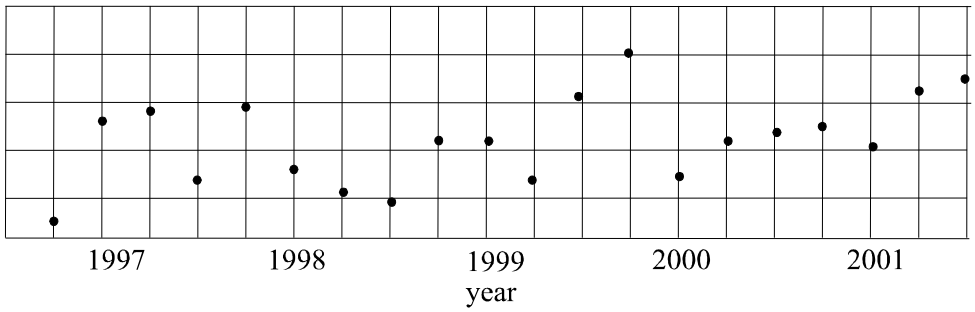
A.



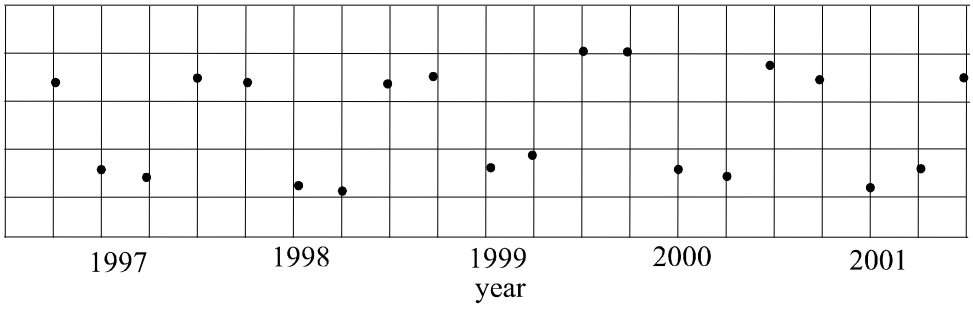
B.



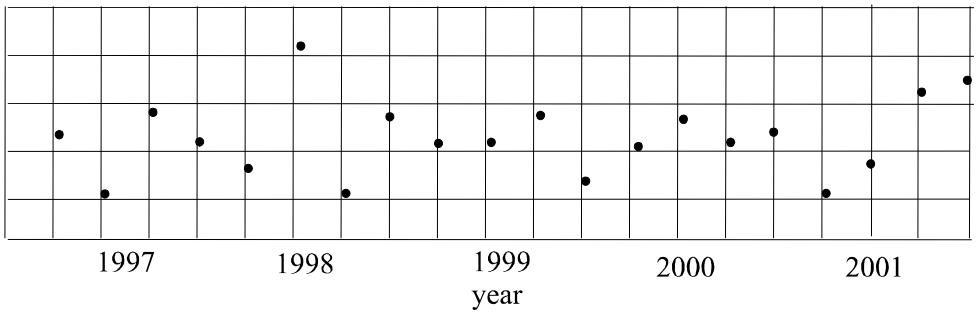
C.



D.



E.

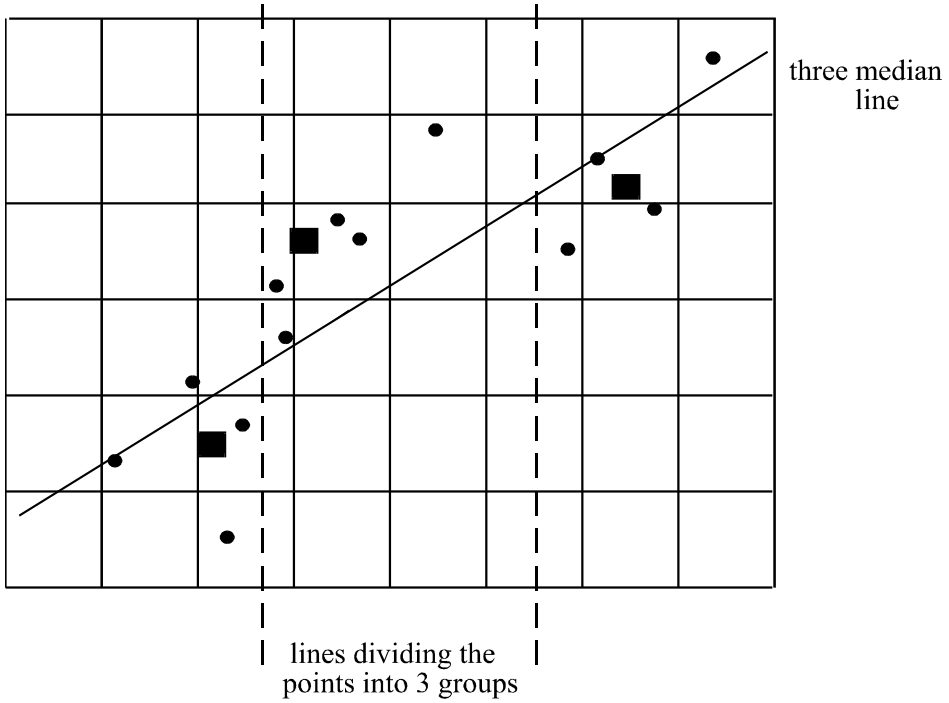


Question 10

George tried to fit a 3 median line to data on a scatterplot. To achieve this he

- divided the data
- marked the three medians with a small box
- found his 3 median line

His attempt is shown below and it is not correct.



The mistake George made in fitting the three median line occurred because

A. he did not divide the data into 3 groups with an equal number of pieces of data in the left and right hand groups.
B. the median of the data in the group on the left was wrong.
C. the median of the data in the group in the middle was wrong.
D. the median of the data in the group on the right was wrong.
E. he did not move the line through the left and right hand groups of data, one third of the way towards the median of the group of data in the centre.

The following information relates to questions 11 to 13.

Huy collects the following data in a biology field experiment. The experiment sought to investigate any correlation between the time taken for parsley seeds to germinate and the daily amount of water a parsley seed received after planting.

Amount of water applied per day (mL)	Number of days taken to germinate
2	13
6	8
7	9
5	6
4	10
3	12
8	9
10	5
9	6
3	12
2	14
5	9

Question 11

To investigate any correlation, Huy's first step should be to

A. calculate Pearson's correlation coefficient
B. draw a scatterplot
C. calculate the coefficient of determination
D. fit a least squares regression line
E. fit a 3 median line

Question 12

After some analysis Huy decided to calculate the least squares regression line equation for the data. That equation is

A. number of days taken to germinate $= -0.8 + 12.9 \times$ amount of water applied per day
B. number of days taken to germinate $= 12.9 - 0.8 \times$ amount of water applied per day
C. number of days taken to germinate $= -0.8 - 12.9 \times$ amount of water applied per day
D. number of days taken to germinate $= -0.9 + 14.4 \times$ amount of water applied per day
E. number of days taken to germinate $= 14.4 - 0.9 \times$ amount of water applied per day

Question 13

Huy also calculated the coefficient of determination. From this figure it could be concluded that

A. the time taken to germinate could be predicted by the amount of water applied per day on 74% of occasions.
B. there was a negative correlation between the amount of water applied per day and the number of days taken to germinate.
C. a lessening in the amount of water applied per day caused a lengthening in the time taken to germinate.
D. 74% of the variation in the number of days taken to germinate could be explained by the variation in the amount of water applied per day.
E. 86% of the variation in the number of days taken to germinate could be explained by the variation in the amount of water applied per day.

Section B

Module 1: Number patterns and applications

If you choose this module, **all** questions must be answered.

Question 1

The fifteenth term of the arithmetic series 87, 80, 73, 66,… is

A. – 11
B. – 4
C. 3
D. 185
E. 192

Question 2

The sum of the first 12 terms of the sequence

2, 6, 18, 54, …

is

A. 222
B. 4096
C. 177 146
D. 354 294
E. 531 440

Question 3

The fourth term of the difference equation

$$t_{n+1} = -3t_n + 2$$

is 41.

The first term of the difference equation is

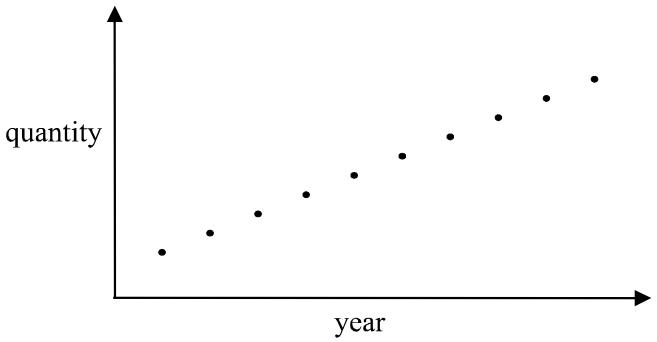
A. – 121
B. – 13
C. –1
D. 5
E. 125

Question 4

The sequence generated by the difference equation $t_{n+1} = t_n - 3, \quad t_1 = 10$ could also be generated by the sequence with rule

A. $t_n = 10 - 3n$
B. $t_n = 13 - 3n$
C. $t_n = -3 + 10n$
D. $t_n = 10(-3)^{n-1}$
E. $t_n = 10(3)^n$

Question 5



The graph above shows the quantity of foodstuffs produced by a manufacturer each year over a number of years. It could be true to say that the manufacturer

A. decreased production by 10% each year.
B. decreased production by the same quantity each year.
C. increased production by 10% each year.
D. increased production by the same quantity each year.
E. increased production by a different quantity each year.

Question 6

At a secondary school of 940 students where there were equal numbers of boys and girls, the ratio of boys to girls in Year 12 was 4 : 5. If there were 48 Year 12 boys at the school, the total number of girls at the school in Years 7 – 11 would be

A. 60
B. 108
C. 410
D. 422
E. 470

Question 7

Company profits are forecast to grow by 8% each year. If the profit in the first year of the company's operation was \$100 000, after how many years would the annual profit for the company be forecast to exceed \$250 000?

A. 12
B. 13
C. 14
D. 15
E. 25

Question 8

Sophie borrows \$60 000 and pays interest of 6.2% on the balance of the loan at the end of June each year. She makes a repayment of \$7500 at the start of July each year. If A_n is the amount that Sophie owes at the start of the *n th* year then a difference equation which describes the amount of money Sophie owes is

A. $A_{n+1} = A_n + 6 \cdot 2A_n - 60\,000$ where $A_1 = 7500$
B. $A_{n+1} = 0 \cdot 062A_n + 60\,000$ where $A_1 = 7500$
C. $A_{n+1} = 1 \cdot 062A_n - 7500$ where $A_1 = 60\,000$
D. $A_{n+1} = 1 \cdot 062A_n + 7500$ where $A_1 = 60\,000$
E. $A_{n+1} = 1 \cdot 62A_n - 7500$ where $A_1 = 60\,000$

Question 9

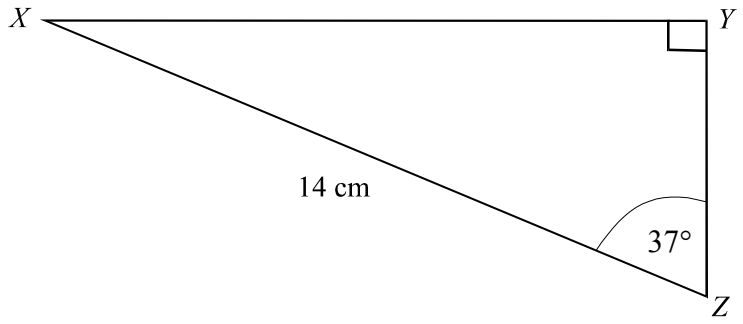
A ball is dropped from a height of 1.2 metres onto a hard surface and rebounds to a height 60% of the previous height reached. If the ball continues in this fashion uninterrupted, then the total distance that it travels in metres is

A. 3.025
B. 4.8
C. 6.05
D. 7.26
E. 8.35

Module 2: Geometry and trigonometry

If you choose this module, **all** questions must be answered.

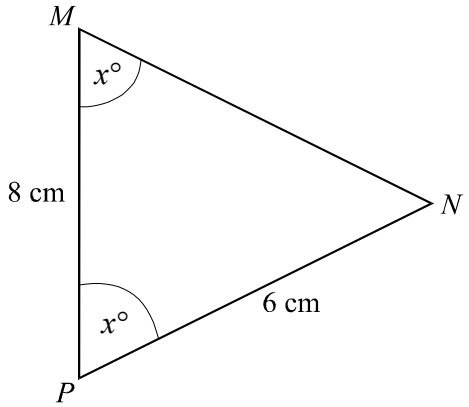
Question 1



In triangle *XYZ*, the length of *YZ* is closest to

A. 5.7 cm
B. 8.4 cm
C. 10.5 cm
D. 11.2 cm
E. 17.5 cm

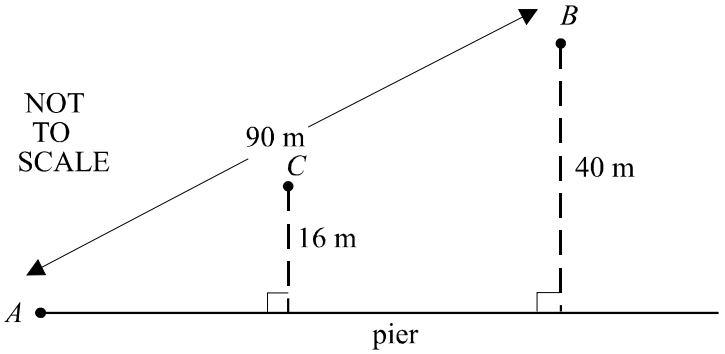
Question 2



Triangle *MNP* is an isosceles triangle with $\angle MPN = \angle NMP = x°$. Also, $MP = 8$ cm and $NP = 6$ cm. The area of triangle *MNP* in square centimetres is

A. 12
B. 24
C. $8\sqrt{5}$
D. $16\sqrt{7}$
E. $4\sqrt{52}$

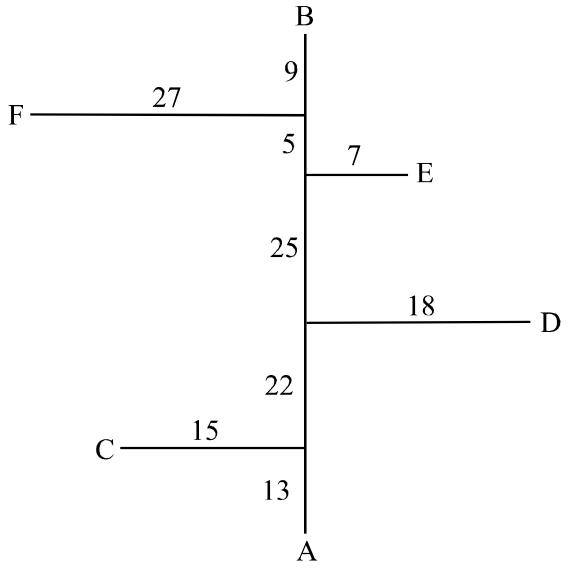
Question 3



Sally and Paul started swimming from point *A* in a straight line towards their Dad's boat which was anchored at point *B*.
Paul swam 90 metres to reach his Dad's boat, which was anchored 40m from a pier. Meanwhile Sally had stopped swimming at *C* and was still only 16m from the pier. Paul and his Dad pulled up anchor and moved the boat in a straight line to Sally. The distance the boat travelled in metres was closest to

A. 24
B. 36
C. 50
D. 54
E. 56

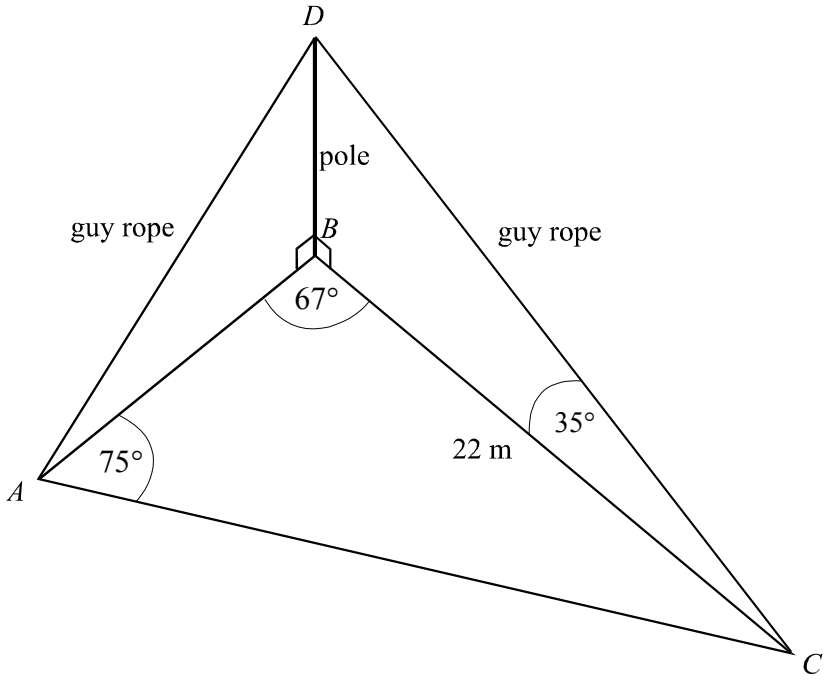
Question 4



The diagram above shows a field sketch from a traverse survey with a base line AB. The distances in metres along AB between the perpendicular offsets are given as are the distances from the base line to the features at points C, D, E and F. The straight line distance between point A and point E in metres is closest to

A. 26
B. 46.5
C. 47.5
D. 59
E. 60.4

The following information relates to Questions 5 and 6.



Two guy ropes *AD* and *CD* are attached to the top of a vertical pole *BD* and are anchored to the ground at points *A* and *C* respectively. Points *A, B* and *C* lie in a horizontal plane. In triangle *ABC,* $\angle BAC = 75^\circ$, $\angle ABC = 67^\circ$ and $BC = 22$ metres.

The angle of elevation of the top of the pole at *D* from point *C* is 35°.

Question 5

The distance *AB* to the nearest metre is

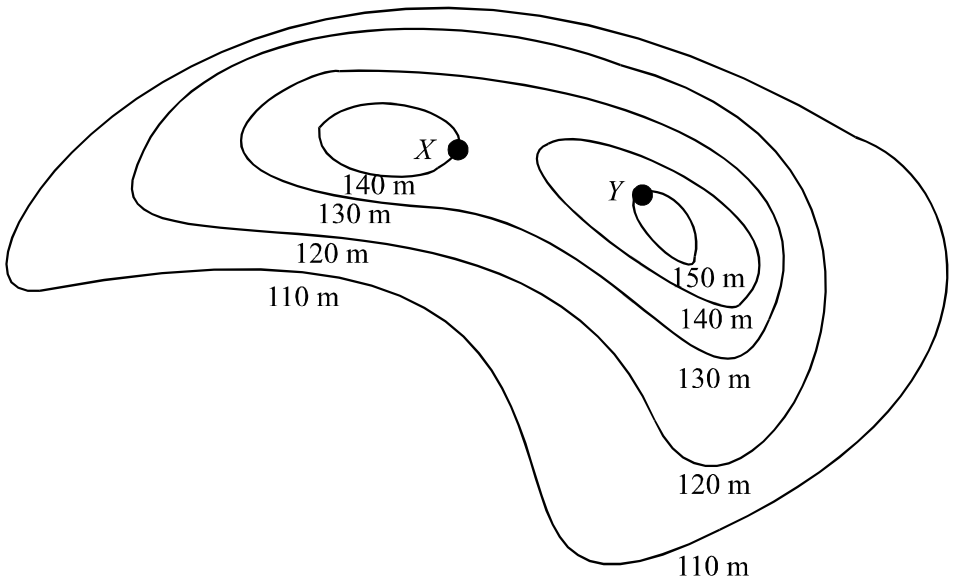
A. 14
B. 17
C. 19
D. 21
E. 22

Question 6

The height of the pole in metres is closest to

A. 12.6
B. 15.4
C. 18
D. 26.9
E. 58.7

Question 7

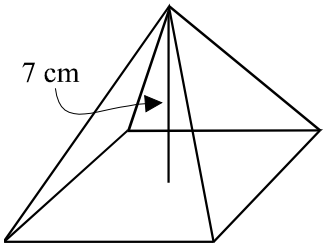


The contour map above shows points X and Y, which are near two hilltops. The angle of elevation of point Y from point X is 4°. The actual distance, in metres, between points X and Y is closest to

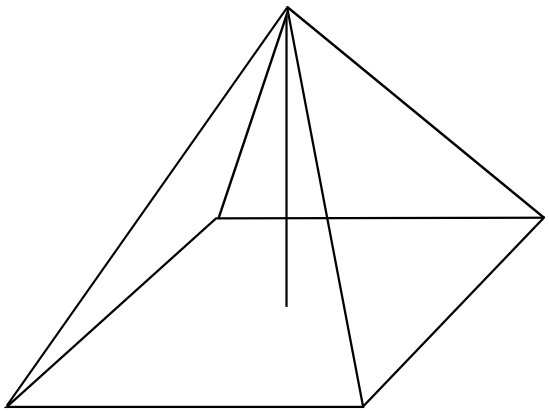
A. 10
B. 38
C. 70
D. 95
E. 143

Question 8

A type of confectionery is sold in a container which is in the shape of a right pyramid with a square base. The confectionery comes in two sizes, small and large, and these two containers are similar in shape. The height of the small container is 7 cm. The volume of the large container is 8 times that of the small container.



small container



large container

The height, in cm, of the large container is

A. 14
B. 21
C. 28
D. 49
E. 56

Question 9

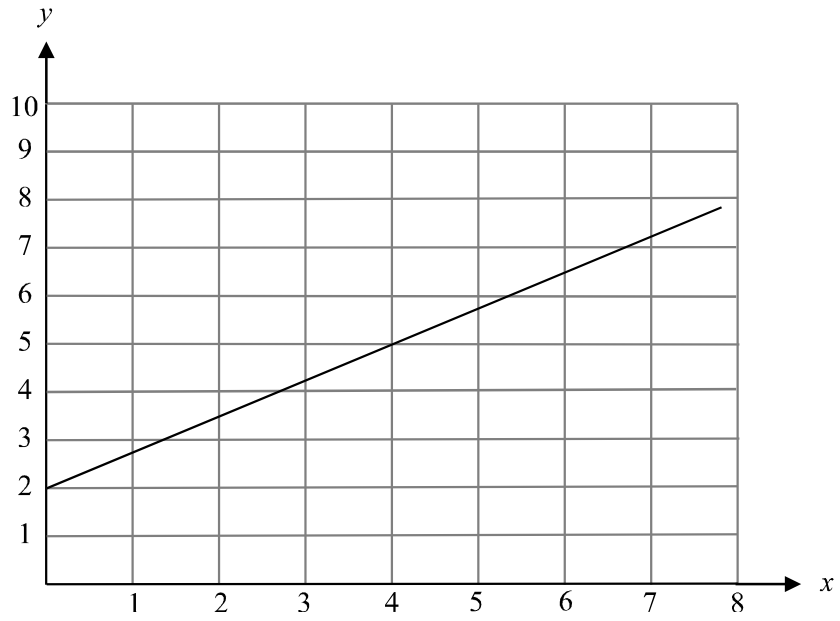
Jane walks due south for 8 km and then walks on a bearing of x° for 7 km. She is now 12 km in a direct line from her starting point. The value of x to the nearest degree is

A. 16
B. 20
C. 74
D. 106
E. 124

Module 3: Graphs and relations

If you choose this module, **all** questions must be answered.

Question 1

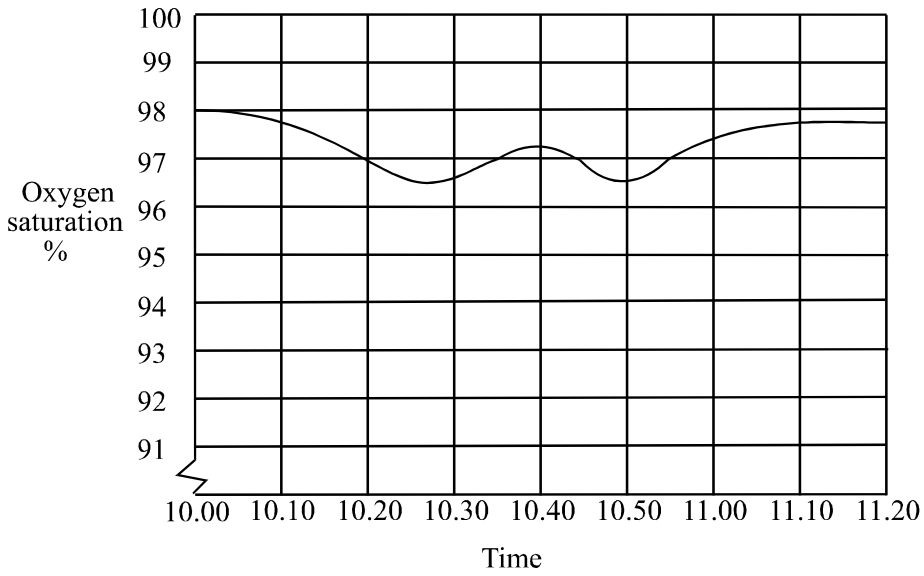


The equation of the straight line shown above is

A. $x = 2$
B. $y = 0$
C. $-3x + 4y = 8$
D. $-3x + 4y = 2$
E. $3x + y = 8$

Question 2

The oxygen saturation level of a patient over a period of 1 hour and 20 minutes is shown on the graph below.

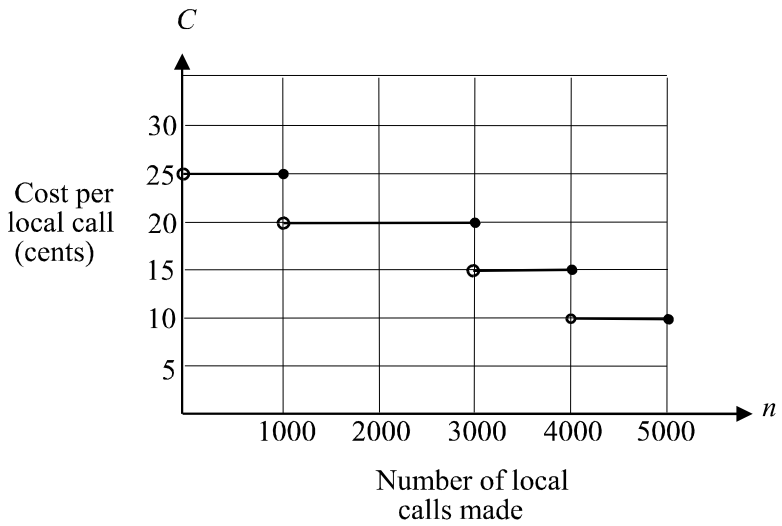


For how many minutes approximately was the oxygen saturation level of the patient below 97% for this time?

A. 10
B. 15
C. 25
D. 35
E. 90

Question 3

A phone company offers a package that provides discounts for businesses that make a large number of local calls. Their charges are illustrated on the graph below.



The rule that describes this graph is

A. $C = \begin{cases} 1000 \text{ for } n = 25 \\ 3000 \text{ for } n = 20 \\ 4000 \text{ for } n = 15 \\ 5000 \text{ for } n = 10 \end{cases}$

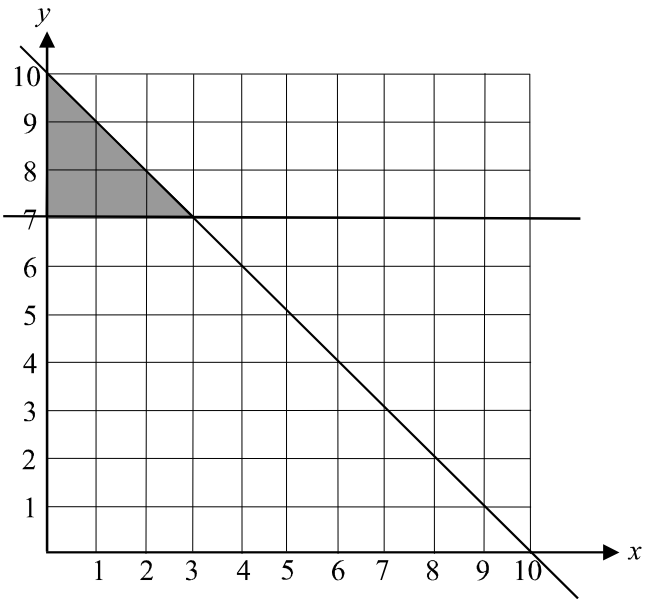
B. $C = \begin{cases} 25 \text{ for } n = 1000 \\ 20 \text{ for } n = 2000 \\ 15 \text{ for } n = 3000 \\ 10 \text{ for } n = 4000 \end{cases}$

C. $C = \begin{cases} 10 \text{ for } 0 < n < 1000 \\ 15 \text{ for } 1000 < n < 3000 \\ 20 \text{ for } 3000 < n < 4000 \\ 25 \text{ for } 3000 < n < 5000 \end{cases}$

D. $C = \begin{cases} 25 \text{ for } 0 < n < 1000 \\ 20 \text{ for } 1000 < n < 3000 \\ 15 \text{ for } 3000 < n < 4000 \\ 10 \text{ for } 40000 < n < 5000 \end{cases}$

E. $C = \begin{cases} 25 \text{ for } 0 < n \le 1000 \\ 20 \text{ for } 1000 < n \le 3000 \\ 15 \text{ for } 3000 < n \le 4000 \\ 10 \text{ for } 4000 < n \le 5000 \end{cases}$

The diagram below relates to questions 4 and 5.



Question 4

The shaded region (boundaries included) shown in the diagram above is described by the set of inequalities

A. $x \geq 7, \quad x + y \geq 10$
B. $y \geq 7, \quad x + y \leq 10$
C. $x \geq 0, \quad y \geq 7, \quad x + y \leq 10$
D. $x \geq 0, \quad y \geq 0, \quad x + y \geq 10$
E. $x \geq 7, \quad y \geq 0, \quad x + y \leq 10$

Question 5

Given that the shaded region represents the feasible region for a linear programming problem and given that the objective function is given by $C = 4x + 3y$ then the minimum value of C is

A. 21
B. 28
C. 30
D. 33
E. 37

Question 6

The solution to the simultaneous equations

$$4x + 3y = 1$$
$$5x + 2y = -4$$

is given by

A. $x = -2,\ y = 3$

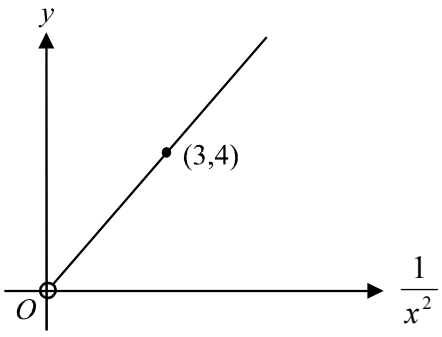
B. $x = -\frac{13}{14},\ y = \frac{11}{7}$

C. $x = 2\frac{1}{2},\ y = 3$

D. $x = 2,\ y = -3$

E. $x = 3,\ y = 2$

Question 7



In the graph above, the graph of y versus $\frac{1}{x^2}$ is plotted for $x > 0$.

The rule connecting x and y is

A. $y = \frac{3}{4x^2}$

B. $y = \frac{4}{3x^2}$

C. $y = \frac{3}{4x}$

D. $y = \frac{4}{3x}$

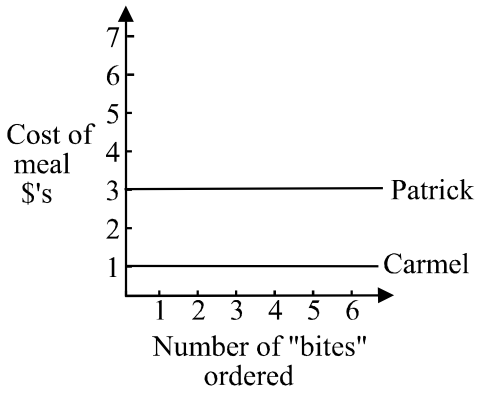
E. $y = \frac{3}{4}x$

Question 8

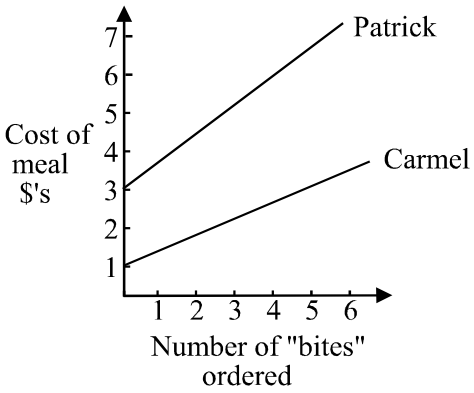
On Friday nights Carmel and Patrick are allowed to have take away food for dinner. Carmel always has a drink that costs $1, and Patrick always has a drink that costs $3. Carmel has "chicken bites" that cost $1.00 each and Patrick has "fishy bites" that cost $0.50 each. The number of "chicken bites" and "fishy bites" that the children order varies according to how hungry they are.

Which one of the following graphs could show the cost of each child's meal?

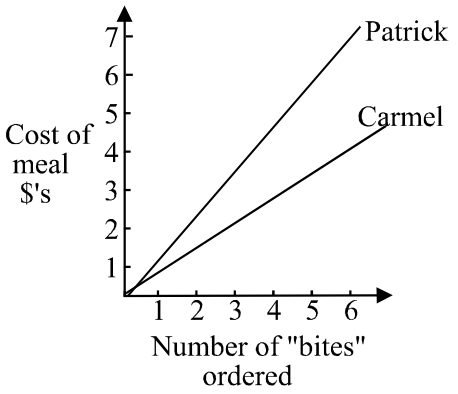
A.



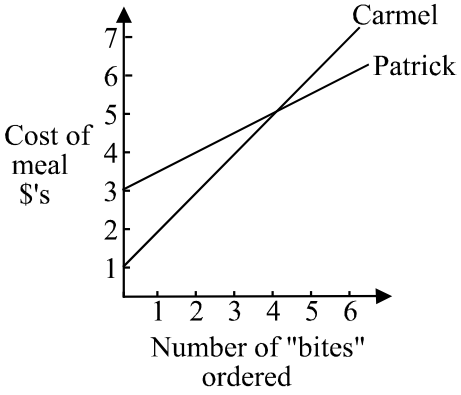
B.



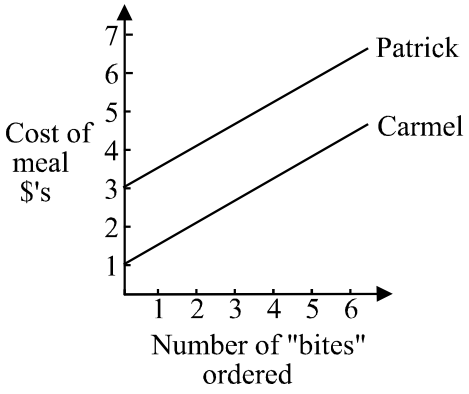
C.



D.



E.



Question 9

A courier service operating in the city centre uses bicycles and motor cycles to deliver document satchels. A bicycle can deliver up to 20 document satchels in a trip and a motorcycle can deliver up to 35 document satchels in a trip. Each bicycle would make 5 trips in a day and each motorcycle would make 8 trips in a day. The company needs to deliver up to 2900 document satchels a day. Let x represent the number of bicycles that the service operates and let y represent the number of motorbikes that the service operates. The constraint caused by the number of document satchels that need to be delivered each day is given by the inequality

A. $5x + 8y \geq 2900$
B. $8x + 5y \leq 2900$
C. $20x + 35y \leq 2900$
D. $100x + 280y \leq 2900$
E. $160x + 175y \leq 2900$

Module 4: Business-related mathematics

If you choose this module, **all** questions must be answered.

Question 1

Garvesh invested $500 in an account which earned simple interest. After 4 years Garvesh had received $104 interest from the investment. The interest per annum for this account was

A. 5.2%
B. 8.9%
C. 17.8%
D. 20.8%
E. 83.2%

Question 2

Julie invests $12 500 in a building society account, which earns interest of 7.8% interest per annum compounding weekly. The amount in this account after 3 years, given that no further withdrawals or deposits are made would be

A. $12 556.33
B. $13 070.98
C. $15 792.79
D. $70 496.90
E. $127 530.07

The information below relates to questions 3 and 4.

A money lender offers personal loans of $5000 with repayments of $240 per month for two years.

Question 3

If someone took up this offer from the money lender, they would pay, in total, interest of

A. $480
B. $760
C. $820
D. $2880
E. $5760

Question 4

The effective rate of interest per annum, which the money lender is offering is

A. 14.03%
B. 14.592%
C. 15.2%
D. 17.03%
E. 29.184%

Question 5

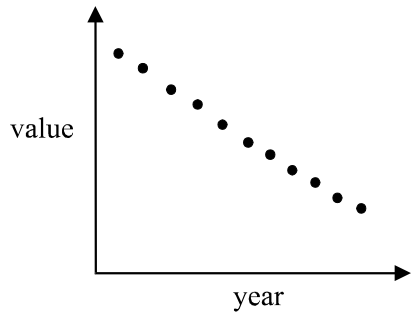
Stuart has taken out a reducing balance loan of $20 000 at 8.2% per annum interest calculated each six months over a period of 3 years. Stuart is to make regular 6 monthly repayments of $3827.67 to repay the loan. The total amount of interest Stuart will pay for this loan is

A. $2966.02
B. $4920.00
C. $5452.73
D. $8516.99
E. $9840.00

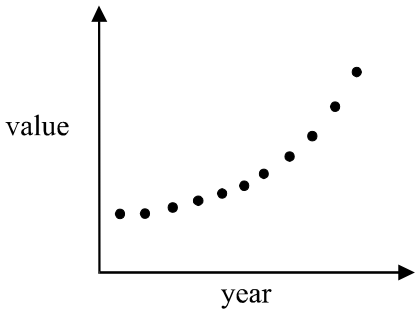
Question 6

Machinery is depreciated using the reducing balance method. The value of the machinery over several years could be described by

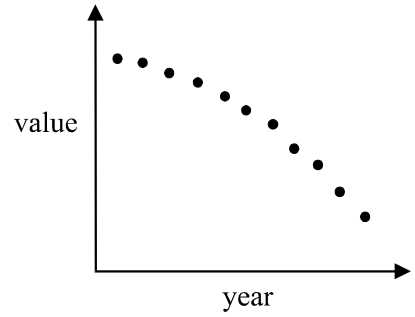
A.



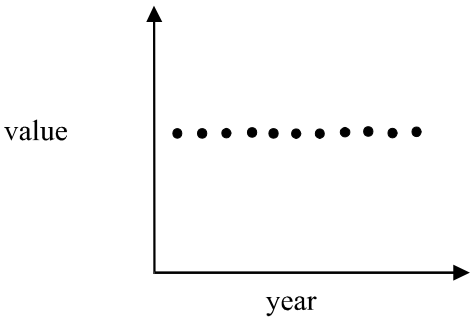
B.



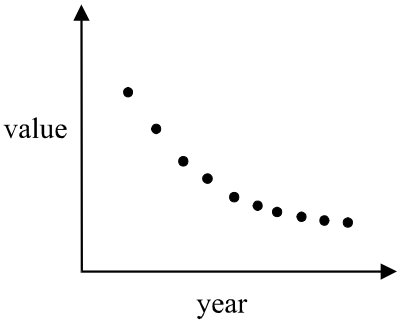
C.



D.



E.



Question 7

Robyn wishes to repay her housing loan of $160 000 over 10 years. The interest on the loan is 7.2% per annum and is calculated quarterly. The quarterly repayment Robyn would have to pay to achieve this is

A. $4106.25
B. $4392.73
C. $5645.72
D. $41816.05
E. $17626.36

Question 8

Ben earns simple interest of 3.6% per annum calculated monthly on the minimum monthly balance and paid on June 30 each year.
A statement for the quarter January – March is shown below for Ben's account.

Date	Credit	Debit	Balance
1-Jan-03			972.63
10-Jan-03	100.00		1072.63
4-Feb-03		450.00	622.63
22-Feb-03	650.00		1272.63
14-Mar-03	120.00		1392.63
30-Mar-03			1392.63

The amount of interest earned by Ben for this quarter would be

A. $8.60
B. $8.90
C. $10.91
D. $11.21
E. $28.68

Question 9

Tom and Ciara are each given the same amount of money to invest by their grandmother. Tom earns 4% interest compounding annually on his amount. Ciara invests in an account earning simple interest. The annual rate of interest Ciara would need to earn on her account so that she and Tom earn the same amount of interest after 5 years is closest to

A. 4.33%
B. 5.4175%
C. 6.08%
D. 24.33%
E. 27.45%

Module 5: Networks and decision mathematics

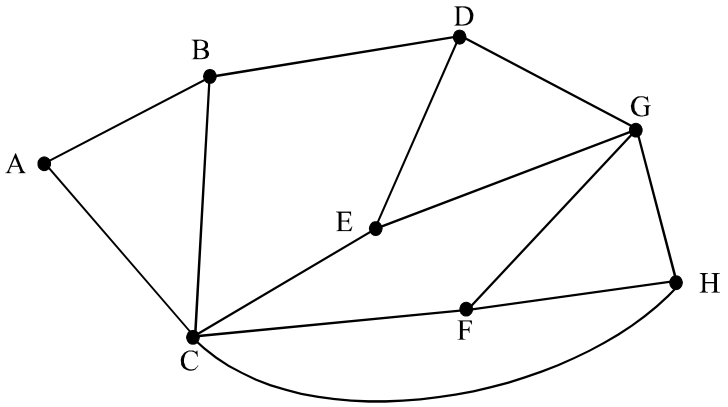
If you choose this module, **all** questions must be answered.

Question 1

A graph has 6 vertices. The minimum number of edges required for this graph to be connected is

A. 3
B. 4
C. 5
D. 6
E. 7

Question 2



On the graph above, the path described by B D E G F H C A is

A. an Euler circuit
B. an Euler line
C. an Hamilton circuit
D. an Hamiltonian line
E. a planar circuit

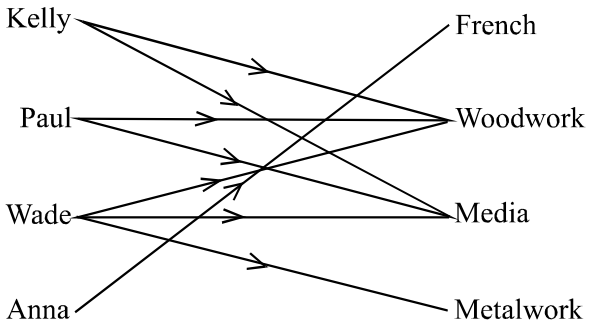
Question 3

A connected planar graph has 9 vertices and divides the plane into 11 regions. The number of edges this graph has is

A. 2
B. 8
C. 18
D. 20
E. 22

Question 4

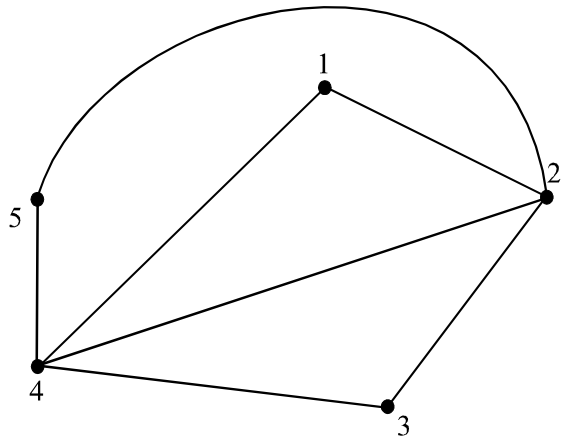
The bipartite graph below shows the preferences of four students for various electives offered to them at school.



Which one of the following statements is **not** supported by the graph?

A. Wade has more preferences than other students
B. None of the students prefer only woodwork and metalwork.
C. Anna has fewer preferences than anyone
D. Media and woodwork are the most popular preferences.
E. Paul has more preferences than Kelly.

Question 5



The graph above could be represented by which one of the following adjacency matrices?

A. $\begin{bmatrix} 0 & 0 & 1 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 & 0 \\ 1 & 0 & 1 & 0 & 0 \end{bmatrix}$

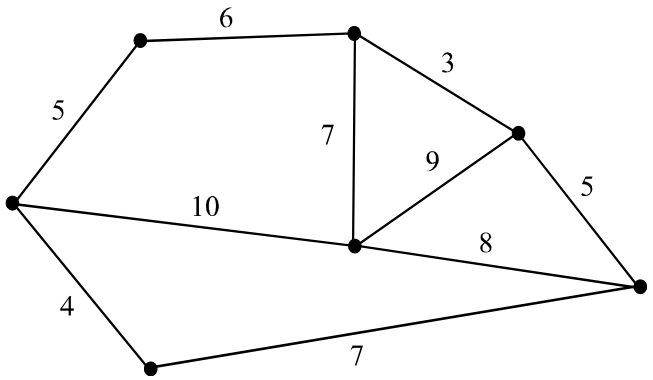
B. $\begin{bmatrix} 0 & 1 & 0 & 1 & 0 \\ 1 & 0 & 1 & 1 & 1 \\ 0 & 1 & 0 & 1 & 0 \\ 1 & 1 & 1 & 0 & 1 \\ 0 & 1 & 0 & 1 & 0 \end{bmatrix}$

C. $\begin{bmatrix} 0 & 1 & 1 & 1 & 0 \\ 1 & 0 & 1 & 1 & 0 \\ 0 & 1 & 0 & 1 & 1 \\ 1 & 1 & 1 & 0 & 1 \\ 1 & 0 & 1 & 1 & 1 \end{bmatrix}$

D. $\begin{bmatrix} 0 & 1 & 0 & 1 & 0 \\ 1 & 0 & 1 & 1 & 0 \\ 0 & 1 & 0 & 1 & 0 \\ 1 & 1 & 1 & 0 & 1 \\ 0 & 0 & 0 & 1 & 0 \end{bmatrix}$

E. $\begin{bmatrix} 0 & 1 & 0 & 1 & 0 \\ 1 & 0 & 1 & 1 & 0 \\ 0 & 1 & 0 & 1 & 0 \\ 1 & 1 & 1 & 0 & 1 \\ 0 & 0 & 0 & 1 & 2 \end{bmatrix}$

Question 6



The total weight on the minimum spanning tree for the above graph is

A. 23
B. 30
C. 37
D. 47
E. 64

Question 7

A manager is assigning four projects to four employees. The table below shows the average time in weeks taken by each of the four employees to complete similar projects in the past.

Employee	Project			
	A	B	C	D
Kate	2	4	5	5
Piv	3	3	7	6
Kiran	4	6	6	3
Eric	4	3	2	3

In order to minimise the time taken to complete the four projects, the manager should

A. assign Kate to project A
assign Piv to project B
assign Kiran to project C
assign Eric to project D

B. assign Kate to project A
assign Piv to project C
assign Kiran to project B
assign Eric to project D

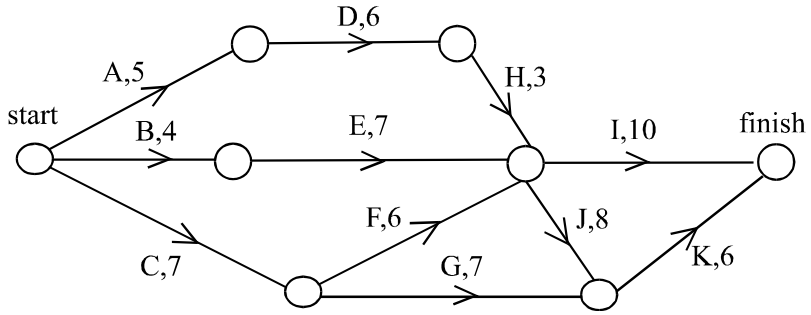
C. assign Kate to project A
assign Piv to project B
assign Kiran to project D
assign Eric to project C

D. assign Kate to project B
assign Piv to project C
assign Kiran to project A
assign Eric to project D

E. assign Kate to project B
assign Piv to project A
assign Kiran to project D
assign Eric to project C

Question 8

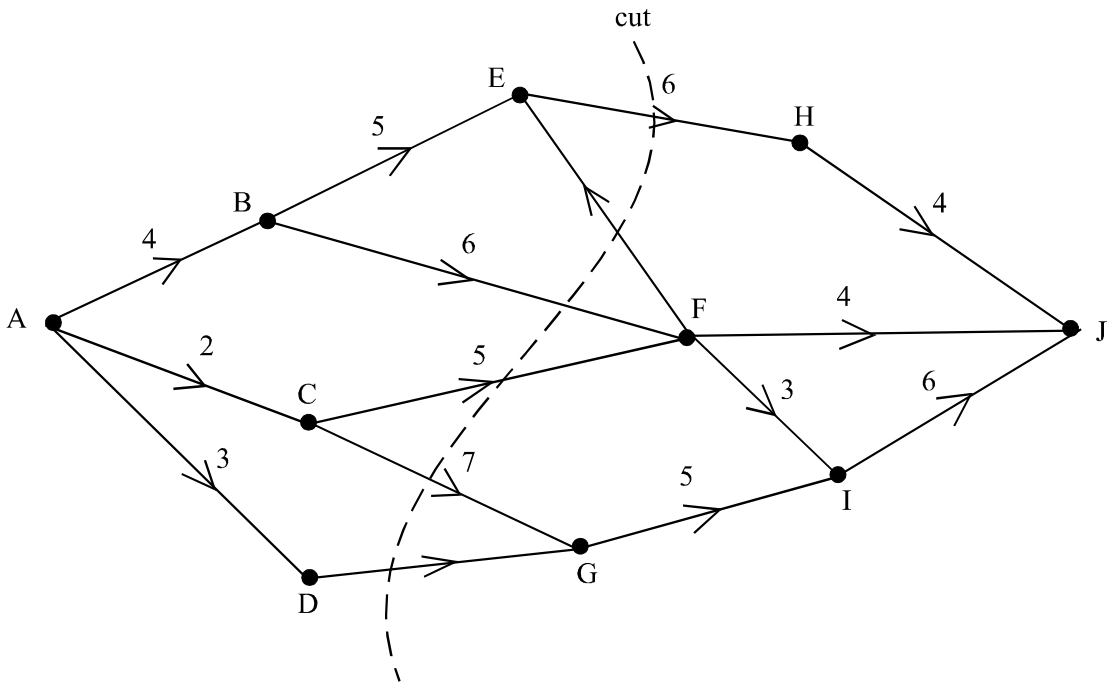
The network below shows the time taken in weeks to complete 9 tasks, which make up a management project.



The minimum time in weeks in which this project can be completed is

A. 20
B. 21
C. 23
D. 24
E. 28

Question 9



The graph above shows a network with the capacities shown on each arc. The capacity of the cut shown, flowing from A to J, is 33. The capacity of the arcs *EF* and *DG* could be respectively

A. 3 and 6
B. 8 and 7
C. 1 and 7
D. 5 and 8
E. 4 and 9

FURTHER MATHEMATICS

TRIAL EXAMINATION 1

MULTIPLE- CHOICE ANSWER SHEET

STUDENT NAME:.....

INSTRUCTIONS

Fill in the letter that corresponds to your choice. Example: (A) (■) (C) (D) (E)

The answer selected is B. Only one answer should be selected.

Section A - Core

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 - Modules

Module Number ___

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 Number ___

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 Number ___

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)