



**KwaZulu-Natal Department of Education
Hillcrest High School
Mathematical Literacy
June Exam 2018**

GRADE 10

EXAMINER: MRS A JUGMOHAN-CHONNOOLAL

MODERATOR: MR B HOPKINS

MARKS: 100

TIME: 2 HOURS

DATE: 30 MAY 2018

INSTRUCTIONS AND INFORMATION

1. This paper consist of Part A and Part B making up a total of six questions. Answer all the questions in both Part A and Part B.
2. There are 10 pages.
3. Use Annexure A for Question 2.2 (Found in Part A of this question paper)
4. Use Annexure B for Question 4.1 (Found in Part B of this question paper)
5. Number the answers correctly according to the numbering system used in this question paper.
3. Rule off after each question.
4. You may use an approved calculator.
5. Show all calculations clearly.
6. Round off to the context unless otherwise stated.
7. Indicate units of measurements clearly, where applicable.

PART A:

QUESTION 1

[14]



Samsung 32 inch HD ready TV

Now: R1 599

Save: R 400

1.1 Lindelwa decided to purchase a TV. She saw the above advert in the Makro catalogue.

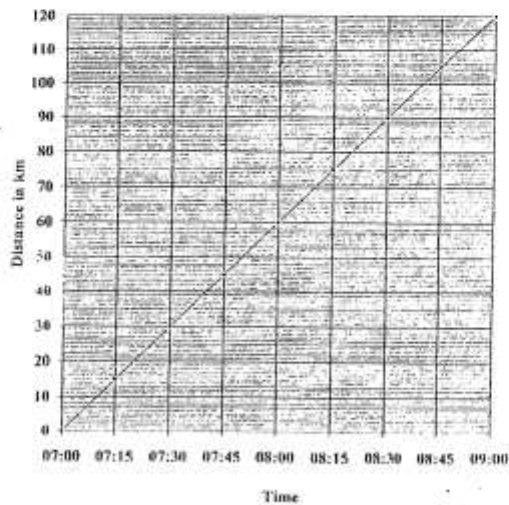
1.1.1 Calculate the original price of the TV. (2)

1.1.2 Determine the percentage discount offered on the TV. Use the following formula:

$$\text{Percentage discount} = \frac{\text{discount amount}}{\text{Original price}} \times 100 \quad (3)$$

1.2 Samantha left home to go visit her friend in Greytown. Below is a graph indicating her distance travelled against time:

DISTANCE TRAVELLED AGAINST TIME



1.2.1 Write down the time that Samantha left home. (2)

1.2.2 How far away from home was Samantha after 1 hour? (2)

1.2.3 What speed was she travelling at (in Km/h). You may use the following formula:

$$\text{Average speed} = \frac{\text{distance (km)}}{\text{time (hours)}} \quad (3)$$

1.2.4 How long (in minutes) did Samantha take to drive to Greytown? (2)

QUESTION 2 (27)

2.1 Revlyn is having a birthday party. He is inviting 150 people. The ratio of children : adults at the party will be 2 : 3. The adults will be served tea while the children will be served concentrated juice.

2.1.1 Calculate how many children will attend the party. (2)

2.1.2 Show by calculation that 90 adults will be at the party. (2)

2.1.3 The dilution factor on the concentrated juice indicate 1 : 4

a) Explain what is meant by this dilution factor? (2)

b) Calculate how many litres of diluted juice can be made from 1,5 litres of concentrated juice. (2)

c) Determine how many servings of 200ml juice can be served from a 5 litre of diluted juice (2)

2.2 Revlyn received an invoice for goods that he needs for catering of the party. The invoice is provided on ANNEXURE A. Study the invoice and answer the questions that follow:

2.2.1 State the date on which he placed the order. (2)

2.2.2 Determine the missing values **A**, **B**, **C** and **D** on the invoice. (8)

2.2.3 Calculate how many days Revlyn has to settle the bill. (2)

2.3 Revlyn makes cakes for the party. He decorated them with green, yellow and red jellytots. One packet of jellytots contains 10 green, 4 yellow and 6 red jellytots. If Revlyn emptied this packet of jellytots into a bowl, determine the probability that a jellytot chosen at random would be:

2.3.1 Red (Give the answer as a percentage) (3)

2.3.2 Black (2)

QUESTION 3

(9)

3.1 Below is a sketch of a laptop

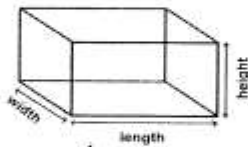


3.1.1 Explain what is meant by the scale 1 : 10 (2)

3.1.2 The length of the sketch is 4,5cm. Calculate the actual length the of the laptop. (2)

3.1.3 The laptop was packed in a box with dimensions:

- length = 53cm
- width = 323mm
- height = 15cm



Convert the above measurements to metres. (3)

3.2 This laptop will be gifted to a friend. The decoration used on this box will be a pink bow. A box of bows cost R17,50 and there 7 bows in a box. Calculate the unit price of the bow. (2)

PART B:

QUESTION 4

(20)

4.1 Simon is a customer at Bandit Bank. He received the new fee structure which is effective from 1 April 2018. Use the fee structure ANNEXURE B to answer the following questions:

4.1.1 Write down how much it will cost him to withdraw R600 from a supermarket till point in 2018. (2)

4.1.2 Calculate (A), the amount Simon paid for administration fees in 2017. (2)

4.1.3 Determine the percentage increase in fees for withdrawing money from a Bandit Bank ATM in 2018 compared to 2017. You may use the following formula:

$$\text{Increase in fees} = \frac{\text{2018 fee} - \text{2017 fee}}{\text{2017 fee}} \times 100 \quad (4)$$

(Round off to the nearest percentage)

4.1.4 State TWO valid reasons why Simon would withdraw money from another bank's ATM when it costs more than using his own bank's ATM. (4)

4.1.5 He has to pay a fee to deposit money into his bank account.

a) Explain why the equation to deposit money into a bank account is:

$$\text{Cost (in rand)} = \frac{n}{100} \times 1,90 \quad (2)$$

b) Give ONE valid reason why it costs money to deposit money into a bank account (2)

4.2 Simon entered the bank at 10:51 and spent 40 minutes in the bank and then drove home. He arrived home at 12:30. Calculate how long the journey home took. (4)

QUESTION 5

(20)

5.1 Amy and Alice went to USA for a holiday last year. They decided to go the Regal Theatre to watch a movie. Below is the internet booking layout of the theatre and their choice of seating.

- The rows are numbered Row 1 to Row 10 and seat 1 to 10
- Amy and Alice chose Row 6, seat 3 (R6 S3) and Row 6, seat 5 (R6 S5)
- Wheel chair seats are indicated by a blank space in a row.
- There are no seats in Row 3 **nor** is it wheelchair seating.

SCREEN

1 2

2

3

4 4 5

5

6 6 7

7 6 7 8

8

9

10 1 2

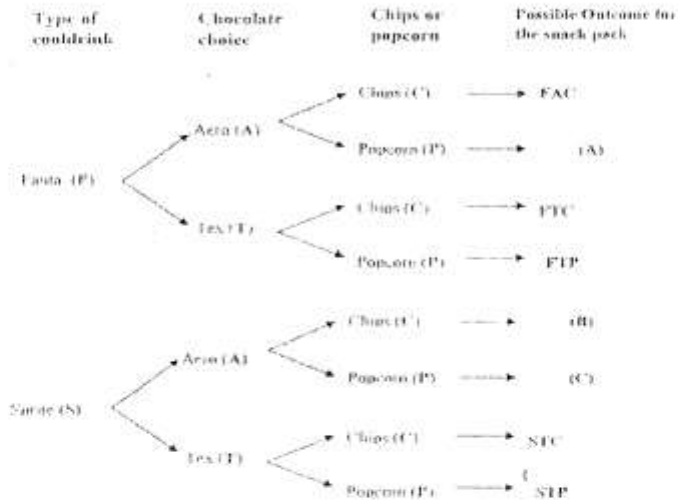
Movie: Gingerclown
Time: November 3, 21:00
Seat: R6 S5 R6 S3
Tickets: 2
Total: \$20
BUY
Option
Sold

Note: \$1 = R14,0818
(Price as at November, 1st, 2017)

- 5.1.1 Determine the maximum number of people that can be seated in the theatre (including wheelchair seating). (2)
- 5.1.2 Write down the ratio of number of wheelchair spaces : total number of seats. (2)
- 5.1.3 How many seats have been sold so far, without counting Amy and Alice's seat? (1)
- 5.1.4 State ONE reason why there are no seats in Row 3. (2)
- 5.1.5 When Amy and Alice made the booking, why do you think they left a space between the both of them? (2)
- 5.1.6 The cost for the both of them totaled to \$20. Convert this to rands. (2)
- 5.1.7 What time will the movie end if it is 150 minutes long? (2)

5.2

TREE DIAGRAM: POSSIBLE CHOICE OF SNACK PACK



5.2.1 Write down the possible outcomes for A, B and C (3)

5.2.2 Determine the probability of selecting a snackpack with sprite as the cooldrink in a simplified form. (2)

5.2.3 Determine the probability of selecting this snackpack with coke as the cooldrink. (2)

QUESTION 6

(10)

6.1 Kira is a grade 10 learner at Hillcrest High school. She travels daily to school by public transport. She has a choice of travelling by bus or taxi. Kira has to be at school by 7.25am.

6.1.1 The bus fare is R9,50 per single trip or R85 for a 10 trip coupon

a) Calculate how much Kira would pay if she travelled to school and back home for five days and paid the single trip fare. (3)

b) Calculate the amount she would save if she used the ten trip coupon to travel to school. (2)

6.1.2 The bus and taxi passes Kira's home every half hour from 06:00. The bus journey takes 40 minutes. The taxi takes 15 minutes to travel from home to school

a) Show by calculation that Kira will not be able to take the 07:00 bus. (3)

b) Write down the latest time that Kira can leave home if she travels by taxi to school. (2)

ANNEXURE A
(Question 2.2)

INVOICE

HIGHWAY GROCER

PO BOX 267
HILLCREST, 3650
PHONE: 031 765 1111
FAX: 031 765 2222
EMAIL: accounts@highwaygrocer.co.za

Billed To: Revlyn Govender
PO BOX 65356
RESERVOIR HILLS
4091

Invoice number: 73025

Invoice Date: 02 May 2018

Payment due date: 07 May 2018

Description	Unit Price	Quantity	Total
10kg flour	R99,95	1	R99,95
1kg margarine	R39,99	2	A
Long life milk (6 pack)	1	1	R59,99
1 dozen	R19,99	B	R39,98
30g jellytots	C	4	R43,00
		TOTAL DUE:	D

Miss K Ndlovu
Accounts Manager

02 May 2018
Date

Thank you for your business. Have a good day!

ANNEXURE B
(Question 4.1)

Transaction Type	2017 Fee	2018 Fee
Administration fee	(A)	R5,50 <i>(25c increase)</i>
Minimum Account Balance	R25,00	R25,00
Cash withdrawal		
PnP/shoprite/Checkers/Boxer till points (Fixed)	R1,25 per R100	R1,30 per R100
Bandit Bank ATM	R5,50	R6,00
Other bank ATM's	R8,00	----- <i>(50c increase)</i>
Deposits		
Notes (ATM)	70c per R100	80c per R100
Coins (ATM)	R1,40 per R100	R1,90 per R100
Notes/coins (branch)	R1,40 per R100	R1,90 per R100
Transfers, payments/purchases		
Debit orders	R3,20	R3,20
Transfer (branch)	-----	R3,60 <i>(20c increase)</i>
Transfer (ATM)	Nil	Nil
Purchase at local/international machines	Nil	Nil