



KwaZulu-Natal Department of Education
REPUBLIC OF SOUTH AFRICA

STANMORE SECONDARY SCHOOL

MATHEMATICS LITERACY

MARCH CONTROLLED TEST

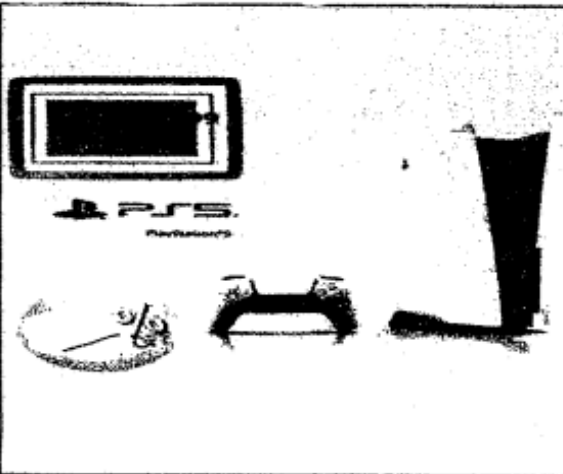
2021

GRADE 10

EXAMINER = MR I MANILAL
TOTAL MARKS: 50

DURATION = 1 Hour
MODERATOR: MR KH MOODLEY

QUESTION 1



Neymar decided to buy the new PlayStation 5. He found the advertisement alongside online. The advert states that the price has been reduced to R9 999,99, with a saving of R250,00.

1.1.1. Calculate the original price of the PlayStation 5.

(3 Marks)

1.1.2. Determine the percentage discount offered on this appliance, using the formula :

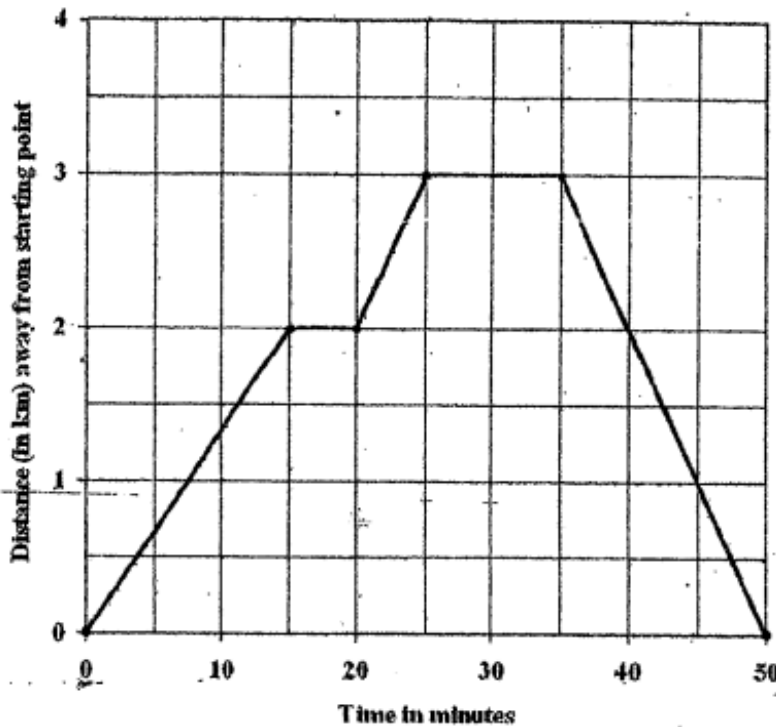
$$\text{Percentage discount} = \frac{\text{Discount amount}}{\text{Original amount}} \times 100\%$$

(3 Marks)

- 1.2. Coach Mario developed a one week training session for Neymar as illustrated in the graph below.

Neymar jogged for 15 minutes and had a 5 minute rest. He then ran for 5 minutes and had a 10 minute rest. Lastly he ran back to the starting point.

Neymar's Training Session



- 1.2.1. Write down how long it took Neymar to run the first 2 km. (1 Mark)
- 1.2.2. Determine how far Neymar was away from his starting point at 45 minutes. (2 Marks)
- 1.2.3. Write down Neymar's total distance covered during the training session. (3 Marks)
- 1.2.4. Determine Neymar's total rest time during the training session. (3 Marks)

QUESTION 2

2.1 . There is no denying the Kardashian family holds some serious power and their news spreads like wild fire. From their reality show to the endless stream of family drama hogging the headlines.

For this reason Kim and her sister's type very fast on their cell phones. They decided to test who can type the fastest by timing how many words can be typed in 30 seconds, without any spelling errors. Their results are shown below:

13 ; 7 ; 8; 9 ; 11 ; 6; 45

2.1.1. Calculate the mean.

(3 Marks)

2.1.2. Determine the median.

(3 Marks)

2.1.3. Calculate the mode.

(2 Marks)

2.1.4. Calculate the Range.

(3 Marks)

2.2. There are 3 children in the Kardashian-West household. Each week the eldest **North** earns \$270, the middle child **Saint** earns \$180 and the youngest, **Psalm** earns \$90.

2.2.1. Re-write the amounts each child receives as a simplified ratio.

(4 Marks)

[15]

QUESTION 3

3.1.

British Chef Gordon Ramsay prepares a meal for couple.
The sauce recipe for two requires:

125g of pasta
300ml of milk

3.1.1 Explain the meaning of indirect proportion.

(2 Marks)

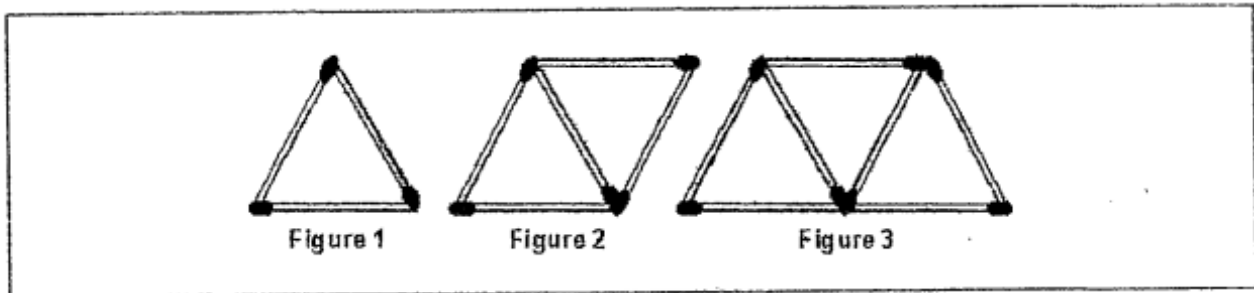
3.1.2. How much pasta will be required if he cooked for seven people?

(6 Marks)

3.1.3. Calculate how much milk he would need if he cooked himself a plate of pasta only.

(3 Marks)

3.2. Study the following number pattern and answer the questions that follow.



3.2.1. What is the difference in the pattern?

(2 Marks)

3.2.2. Determine the rule for this number pattern.

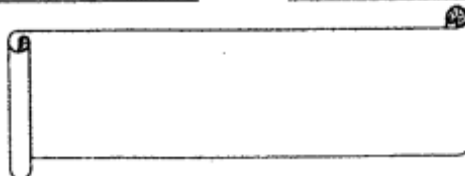
(4 Marks)

3.2.3. How many matchsticks will be used in the 20th pattern?

(3 Marks)

[20]

END





Education

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130-28

STANMORE SECONDARY SCHOOL
MATHEMATICS LITERACY
MARCH MEMORANDUM
2021
GRADE 10

EXAMINER = MR I MANILAL
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DURATION = 1 Hour
MODERATOR: MR KH MOODLEY

QUESTION 1		
1.1.1.	Original Price = R9 999R, 99 + R250.00✓ = R10 249, 99✓✓	3 Marks
1.1.2.	Percentage discount = $\frac{\text{Discount amount}}{\text{Original amount}} \times 100\%$ = $\frac{250}{R9\,999.99} \times 100\%$ ✓✓ = 2.44%✓	3 Marks
1.2.1.	15 minutes✓	1 Mark
1.2.2.	3 km ✓✓	2 Marks
1.2.3.	Total Distance = 3km + 3km ✓✓ = 6 km✓	3 Marks
1.2.4.	Total Rest = 5 ^{min} km + 10 ^{min} km ✓✓ = 15 km ^{min} ✓	3 Marks

QUESTION 2		
2.1.1.	$\text{Mean} = \frac{13+7+8+9+11+6+45}{7}\sqrt{}$ $= \frac{99}{7}\sqrt{}$ $= R14, 14\sqrt{}$	3 Marks
2.1.2.	6 ; 7 ; 8 ; 9 ; 11 ; 13 ; 14 √√ Median = 9√	3 Marks
2.1.3.	Mode = There is no mode √√	2 Marks
2.1.4.	Range = 14 ¹⁵ - 6 √√ = 8 ⁹ √	3 Marks
2.2.1.	270 : 180 : 90 √ 3 : 2 : 1 √√√	4 Marks

QUESTION 3		
3.1.1.	As one quantity increases the other decreases and vice versa $\checkmark\checkmark$	2 Marks
3.1.2.	$\text{Pasta for 1 person} = \frac{125}{2} \checkmark\checkmark$ $= 62,5\text{g} \quad \checkmark$ $\text{Pasta for 7 People} = 7 \times 62.5\text{g} \quad \checkmark\checkmark$ $= 437,5\text{g} \checkmark$	6 Marks
3.1.3.	$\text{Milk for 1 person} = \frac{300}{2} \checkmark\checkmark$ $= 150 \checkmark$	3 Marks
3.2.1.	$5-3 = 2$ $7-5 = 2 \checkmark$ $\text{Therefore } d = 2 \checkmark$	2 Marks
3.2.2.	$T_n = a + (n-1) \times d \quad \checkmark$ $= 3 + (n-1) \times 2 \checkmark$ $= 3 + 2n - 2 \checkmark$ $= 2n + 1 \checkmark$	4 Marks
3.2.3.	$T_n = 2n + 1$ $T_{20} = 2(20) + 1 \quad \checkmark\checkmark$ $= 41 \quad \checkmark$	3 Marks