

HILLCREST HIGH SCHOOL



GRADE 9

JUNE EXAMINATION 2015

MATHS NON CALCULATOR PAPER 2

TIME : 1 HOUR

MARKS : 70

EXAMINER : MRS WOODROW
MODERATOR : MRS COLE

INSTRUCTIONS TO CANDIDATES

1. This paper consists of 7 questions.
2. Answer ALL questions.
3. **NO CALCULATORS ARE ALLOWED FOR THIS EXAMINATION .**
4. **ALL CALCULATIONS MUST BE SHOWN CLEARLY.**
5. All final answers must be rounded off correct to **TWO decimal places** unless stated otherwise.
6. Indicate units of measurement, where applicable.
7. Start each question on a **NEW PAGE**.
8. Write neatly and legibly.

3 QUESTION 3

3.1 Questions and Answers :-

- 3.1.1 The Temperature on a warm summers day in Durban is 29°C . On the same day in Nebraska the temperature is -19°C . What is the difference in Temperature? (2)
- 3.1.2 There are 28 pupils on a bus. If the ratio of boys to girls is 2:5. How many boys are there on the bus? (3)
- 3.1.3 Alistair road in a cycle race over the weekend. His average speed was 25km/hr . If the race is 50km .
- 3.1.3.1 How long did it take him to complete the race? (3)
- 3.1.3.2 If it took his sister 2 hours and 30 minutes to ride the same cycle race last year. What was her average speed? (3)

[11]

4 QUESTION 4

- 4.1 Given that $a = -1$; $b = 7$ and $c = 0$ find the value for each of the following expressions. Show all working :-
- 4.1.1 $17abc$ (3)
- 4.1.2 $10ab^2 - 15a + 3b$ (4)

[7]

5 QUESTION 5

- 5.1 Refer to the following information and answer the questions that follow :-

x	1	2	3	4	5
y	4	7	10	13	16

- 5.1.1 What is the constant difference? (1)
- 5.1.2 What is the general term? (3)
- 5.1.3 What will the function value be if the input value is 16? (2)
- 5.1.4 What will the function value be if the output value is 157? (2)

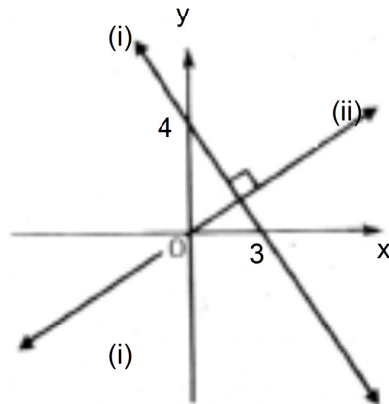
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6 QUESTION 6

6.1 Refer to the diagram below and answer the questions that follow :-

6.1.1 Find the equation of line (i) (4)

6.1.2 Find the equation of line (ii) (4)



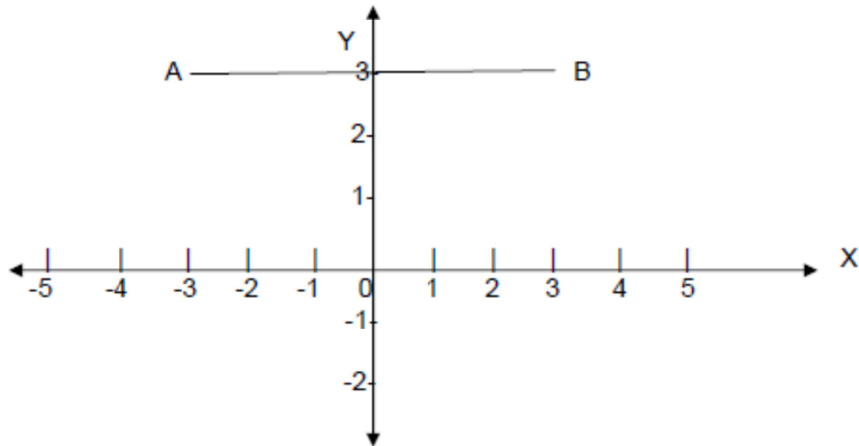
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7 QUESTION 7

Answer the following questions on the accompanying sheet **ANNEXURE 1**

7.1 The equation for the line graph AB below is: (2)

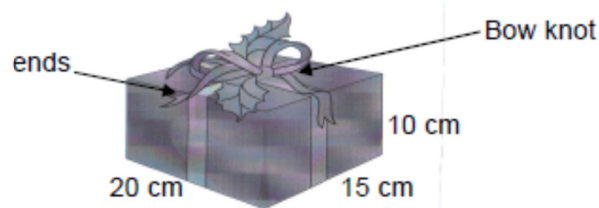


- A $x = 3$
- B $y = 3$
- C $x = y + 3$
- D $y = x + 3$

7.2 The expression $(x + 3)(x - 2) + 2x^2$ is ... (2)

- A $3x^2 + x - 6$
- B $3x^2 - x - 6$
- C $3x^2 + 2x - 6$
- D $3x^2 + 5x - 6$

7.3 Zelha has prepared her mother's birthday-present tied with a ribbon as shown. The bow knots and ends used 47 cm of ribbon. (2)



The total length of the ribbon used in metres is ...

- A 30,47 m.
- B 0,45 m.
- C 0,92 m.
- D 1,57 m.

7.4 Tommy, Andile and Temba dig a hole in 6 days. If they are assisted by 6 friends, how long will they take, working at the same rate, to dig a hole of the same size? (2)

- A 9 days
- B 2 days
- C 4 days
- D 18 days

7.5 Which of the following is not a property of rational numbers? (2)

- A Terminating decimals
- B Recurring decimals
- C Square root of a perfect square
- D Cube root of a prime number

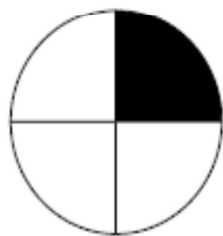
7.6 $(2^2)^3 \times (2^2)^{-3}$ Simplified is: (2)

- A 2^{10}
- B 2^{-1}
- C 2
- D 1

7.7 $a = 4$; $b = 6$ and $c = 5$ then the value of $2a + bc =$ (2)

- A 77
- B 70
- C 54
- D 38

7.8 The circles below are divided into parts. When the shaded in circle 1 is added to the shaded part in circle 2, their sum is equivalent to: (2)



Circle 1



Circle 2

- A $\frac{2}{7}$
- B $\frac{1}{2}$
- C $\frac{2}{5}$
- D $\frac{7}{12}$

7.9 Which of the following is a solution to $2x + y = 5$? (2)

- A (0 ; 3)
- B (-2 ; 1)
- C (5 ; -5)
- D $(-\frac{1}{2}; 6)$

7.10 Which ONE of the following numbers is rational? (2)

- A π
- B $\sqrt{-1}$
- C $1,2\bar{3}$
- D $\sqrt{10}$

[20]

GRAND TOTAL [70]

ANNEXURE 1

QUESTIONS 1

	TRUE	FALSE
1.1		
1.2		
1.3		
1.4		
1.5		
1.6		
1.7		
1.8		

QUESTION 7

7.1	
7.2	
7.3	
7.4	
7.5	
7.6	
7.7	
7.8	
7.9	
7.10	