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CANDIDATE IDENTIFICATION NUMBER	SUBJECT CODE 0570	PAPE	R NU 2	MBER
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SUBJECT TITLE	SUBJECT CODE	PAP	ER N	UMBER
MATHEMATICS	0570		2	
	EXAMINATION DA	ATE: .	JUNE	2020
Two and a Half hours		Que	stion	MARKS
Enter the information required in the boxes above. This paper is arranged in two sections, A and B. Answer ALL questions in Sections.	stos off mosonon A and B.	d'iens	grib na	a'X o won'i (s)
Section A: Answer ALL the questions in the spaces The mark allocation for each question is	provided. indicated.			
Section B: All questions in Section B carry equal ma	arks.			00 × 000 1 0 400
You are reminded of the necessity for good presentation in your answers. In calculations, you the steps in your working, giving your answer at ea Calculators are allowed	English and orderly are advised to show all ach stage.	i ti sitiz	1 5141	ज्ञी ज्ञीन्त्रवादातः ज्ञान्त्र
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	<u>SECTIOI</u>	<u>N A</u>			
	ANSWER ALL 15 OUESTIO	NS IN THIS	SECTIO	V	
					9.0 S.P.
Si	implify $\frac{2}{2} + \frac{3}{4} \div \frac{6}{7} - \frac{11}{12}$				
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	· · · · · · · · ·				(4 ma
2	Given the sets $A = \{0 \le r \le 4, r \in \mathbb{Z}\}$ and $B = \{-1 \le r \le 2\}$	$r \in \mathbb{Z}$ list	and the set		
2.	(a) The elements of the set A	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	(a) The clements of the sector				
		21294		· . · . · .	-1.
	(b) The elements of the set B				
	(c) Draw a Venn diagram to represent the sets.	· · · · · · · · · · · · · · · · · · ·			
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	ларана. Таката	5 x 2 x 2 x 2	di sata	12 , g	
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3.((a) Complete the logic table in figure				1.10.18
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	Figure 1				
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	(b) Represent the solution of (a) on a real number line.	
•	in and addition of the second addition of the	(6 m
Τ	The functions g and h are defined on R, the set of real number $\frac{2}{3}$	er as follows
	g: $x \mapsto x^2 + 2$ and $h: x \mapsto x+2$, find (a) g(2)	Α
	(b) $h^{-1}(x)$	
		a la construction de la construc
	with AC* 30m and Alice 1 Am. Find the area of the charled	ducation of COOL A Data in the case of COA. Convert
	(c) $hg(x)$	HI HERTEL, AND IS & SUBI-GROUP, ADC D IS RECEIVED.
		e logical o Call De conte los clas on estavas
		· · · · · · · · · · · · · · · · · · ·
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		(7 m
	$\frac{1}{2}$	
	(a) Find the relation between x and y = 10 when $x = \frac{3}{3}$.	The sum of the first it term of a common is aiven by
	(a) I not the relation between x and y	
	·····	
	(b) Hence find the value of x when $y = 6$	ты жас вистура и зацинст
35	an 8-)	
		(5 m



	050 ⁰ . Find	4	£≥⊆ -		
	(a) The height of the tower to one de	ecimal place			- 19 - 19 - 19 - 19 - 19 - 19 - 19 - 19
			· · · · · · · · · · · · · · · · · · ·	in an	
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		ee o morenaar marsaan a			an a
(b) The angle of depression of the point of t	int M from the top o	of the tower.		
		•••••••••••••••••••••••••••••••••••••••			
	1	evolid estodo	, the set of real non	e defined on R.	na il bino o presidenti (4 m
			6001.S	$+x \leftarrow y : u h$	2.0 H-3.4 + 2an
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	B B Contraction of the second states of	D			
	Figure 2				
	- 1941 0 2				
	In figure 2. AFB is a semi-circle A	BCD is rectangle w	ith A C = 20	and the second sec	ere produkter kan kan se
	In figure2, AEB is a semi-circle. A	BCD is rectangle w	vith AC= 20m and	AB= 14m, Find	the area of the shaded
	In figure2, AEB is a semi-circle. A region.	ABCD is rectangle w	ith AC= 20m and	AB= 14m, Find	the area of the shaded
	In figure2, AEB is a semi-circle. A region.	BCD is rectangle w	rith AC= 20m and .	AB= 14m, Find	the area of the shaded
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1	In figure2, AEB is a semi-circle. A region.	ABCD is rectangle w	with AC= 20m and $\frac{1}{2}$	AB= 14m, Find	I the area of the shaded
2	In figure2, AEB is a semi-circle. A region.	ABCD is rectangle w	with AC= 20m and $\frac{1}{2}$	AB= 14m, Find	the area of the shaded
	In figure2, AEB is a semi-circle. A region.	ABCD is rectangle w	with AC= 20m and $\frac{1}{2}$	AB= 14m, Find Z^{\bullet} into z accord	the area of the shaded
2	In figure2, AEB is a semi-circle. A region.	ABCD is rectangle w	with AC= 20m and $\frac{1}{n} = 2n^2 - n, n \in \frac{1}{n}$	AB= 14m, Find Z^{\bullet} .	I the area of the shaded
	In figure2, AEB is a semi-circle. A region.	ABCD is rectangle w	with AC= 20m and $\frac{1}{2}$	AB= 14m, Find	the area of the shaded
	In figure2, AEB is a semi-circle. A region.	ABCD is rectangle w	with AC= 20m and $\frac{1}{n} = 2n^2 - n, n \in \mathbb{R}$	AB= 14m, Find Z^{\bullet} intervals	the area of the shaded
	In figure2, AEB is a semi-circle. A region.	ABCD is rectangle w	with AC= 20m and $\frac{1}{n} = 2n^2 - n, n \in \mathbb{R}$	AB= 14m, Find Z^{*} 1 ms x months Z^{*}	the area of the shaded
	The sum of the first n term of a seq (a) Find the first three terms of the 	ABCD is rectangle w	with AC= 20m and $\frac{1}{n} = 2n^2 - n, n \in \mathbb{R}$	AB= 14m, Find Z^{\bullet} interview	the area of the shaded
	The sum of the first n term of a seq (a) Find the first three terms of the (b) State the type of sequence.	ABCD is rectangle w	with AC= 20m and $\frac{1}{n} = 2n^2 - n, n \in \mathbb{R}$	AB= 14m, Find $Z^{\bullet} = 14m \times 100000$	the area of the shaded (6 ma (6 ma (6 ma (5 ma)
	The sum of the first n term of a seq (a) Find the first three terms of the (b) State the type of sequence.	ABCD is rectangle w	with AC= 20m and $\frac{1}{n} = 2n^2 - n, n \in \mathbb{R}$	AB= 14m, Find Z^{\bullet} . The Z meret	I the area of the shaded (6 ma (6 ma (5 ma)) (5 ma)
	The sum of the first n term of a seq (a) Find the first three terms of the (b) State the type of sequence.	ABCD is rectangle w	with AC= 20m and $n = 2n^2 - n, n \in \mathbb{R}$	AB= 14m, Find $Z^{\bullet} = 14m z$	the area of the shaded (6 ma (6 ma (5 ma)
	In figure2, AEB is a semi-circle. A region.	ABCD is rectangle w	with AC= 20m and $n = 2n^2 - n, n \in \mathbb{R}$	AB= 14m, Find Z^{\bullet} into z according Z^{\bullet} into z according	the area of the shaded (6 ma (6 ma (5 ma) (5 ma)
	The sum of the first n term of a seq (a) Find the first three terms of the (b) State the type of sequence.	ABCD is rectangle w	with AC= 20m and $\frac{1}{2}$	AB= 14m, Find Z^{\bullet} and Z^{\bullet} approximately approx	the area of the shaded (6 ma (6 ma (5 ma)
	The sum of the first n term of a seq (a) Find the first three terms of the (b) State the type of sequence.	ABCD is rectangle w	with AC= 20m and $n = 2n^2 - n, n \in \mathbb{C}$	AB= 14m, Find	the area of the shaded (6 ma (6 ma (5 ma) (5 ma)
	The sum of the first n term of a seq (a) Find the first three terms of the (b) State the type of sequence.	ABCD is rectangle w	with AC= 20m and $\frac{1}{n} = 2n^2 - n, n \in \mathbb{R}$	AB= 14m, Find	the area of the shaded (6 ma (6 ma (5 ma) (5 ma)



4

10. Given the matrices $A = \begin{pmatrix} 5 & 2 \\ 2 & 0 \end{pmatrix}$ and $B = \begin{pmatrix} -3 & 0 \\ 2 & 0 \end{pmatrix}$	
(a) State the transpose of the matrix A	
(b) Find the matrix A-B	
	(5 marks)
Q V O 120° $Figure 3$	
In figure3 APQ is a circum-circle. The chord AP subtends an angle of 120° at to values of the angles (a) x	he centre, O, of the circle. Calculate the
	finan aya a tayar aya
(b) y	
	(5 marks)
	t t sa h

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12.	The coordinates of the points A,B,C are (1,3), (2,y), and (4 line, find	, 6) respectively. Giv	en that A, B and C are	on a straight
	(a) the value of v	L H bros	A Rooman of	
		Agines		
a k a na sa a				••••••
				••••••
	(b) the lengths of the line segments AB, leaving your and	swer in surd form.	Rev Veren of	
ab terrer				1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
24.2.8.2.8				
			<u> </u>	
	(c) The ratio AB: BC	/*	1 1	
				••••••
			1 1021 181	(6 marks)
				-1
	en en ser Maria en 1939, com e d'arrente en entre			
· ·	(b) Not a red ball			
marks	(c) A red or white ball			
	and fundamenter and suffrage concernance			
				(6 marks)





(b) The total number of goals scored by the team last football season

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(5 marks)

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SECTION B

ANSWER ALL FOUR QUESTIONS IN THIS SECTION. EACH QUESTION CARRIES 15 MARKS

- 1. (i) Three friends Michael, Peter and John bought a plot for 2,800,000FCFA from a man who agreed to be paid 65% of its value as initial deposit.
 - (a) Calculate the initial deposit
 The deposit is paid by Michael, Peter and John in the ratio 5:3:2 respectively.
 - (b) Determine the amount paid by Peter Given that 91000FCFA is to be paid as processing fee for the documents
 - (c) Find the percentage of the initial deposit needed to process the documents
 - (d) Calculate the balance expected to be paid to the man.

(ii) Given the matrix M=
$$\begin{pmatrix} 4 & 5 \\ 2 & 3 \end{pmatrix}$$
, find

(a) The determinant of M

(b) The adjugate of M

- (c) Hence the inverse of M
- 2. (i) The scores of twenty students in a Physics test are recorded as follows
 - 70 80 78 98 84 67 98 70 80 100
 - 87 83 70 70 88 91 70 78 88 88
 - (a) Represent the above scores on a frequency distribution table. Determine,
 - (b) The mode of the distribution
 - (c) The median score
 - (d) The mean score

(ii) A straight line l_1 passes through the points P(3,4) and Q (1,-2), and meets the y-axis at R.

- (a) Determine the equation of the line l_1 .
- (b) The coordinates of the point R.

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- 3. Given the coordinates of the vertices of triangle, ABC as A(1,4), B(1,1) and C(3,1),
 - (a) Find the coordinates of the vertices of the triangle A'B'C' obtained by rotating triangle ABC through 90⁰, anticlockwise, about the origin.
 - (b) On a graph paper taking 1 cm to represent 1 unit on both axis for values $-4 \le x \le 7$ and $-2 \le y \le 10$, plot triangle, ABC and A'B'C'.

Triangle A'B'C' is mapped onto triangle A'B'C' by a reflection on the mirror line x + y = 6

- (c) Draw the line x + y = 6.
- (d) Reflect A'B'C' on the line x + y = 6.
- (e) Determine the coordinates of triangle A["]B"C"

4. (i) Given the function $f(x) = 5 + 3x - x^2$.

Taking values of x for -2 to +5 and using a scale of 1cm to represent 1 unit on both axis,

(a) Draw the graph of f(x)

Using your graph,

(b) Determine the value of x for which $5+3x-x^2=0$.

- (c) Find the gradient of the curve at the point it cuts the y-axis
- (ii) P and Q have position vectors 3i + 2j and -i + 2j respectively. **OP** = 3**OQ** + 2**OR**, find
 - (a) **2OR** in terms of **i** and **j**
 - (b) The position vector of **R**



