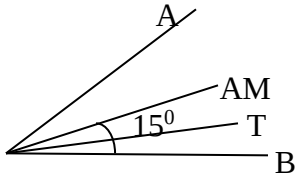
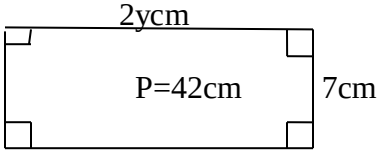
MOCK EXAMINATION MARCH/APRIL 2019

MATHEMATICS PAPER 2 MARKING SCHEME

	SOLUTION(SECTION A)	MARKS	COMMENTS
1.	- Draw line QR=7cm - Identify point P, 6cm from Q 6cm from R -Join PQ and PR	1 1 1 1 4	
2	Description of -choice of suitable scale -drawing of axes -drawing of eve bars with equal spacing representing number of vehicles for each day -Labeling of the axes and giving title of the graph	 1 1 1 1 4	
3	-Arrange the scores in ascending order; 7, 9, 01, 12, 12, 14, 15, 18, 22, 23, 25, 26, 30, 32, -Identify the middle number i.e. 15 and 18 -Get the mean of the two middle numbers $\frac{15+18}{2}$=16 ½	 2 2	
4	T/aid – balance (beam) and weights -Description; Place 26 known masses on one side and the unknown mass with 17 known masses on the other side. -Remove the known masses from both pans -Count the number of known masses that balance the unknown mass and conclude. M+16=24 M+17=26-17 M=9	1 1 1 1 4	
5	T/Aid: pair of compasses & ruler -Construct angle 30^0 from $\angle 60^0$ -Bisect $\angle 30^0$ to get and 15^0 -Construct $7\frac{1}{2}^0$ by bisecting 15^0  OMT = $7\frac{1}{2}^0$	1 1 1 3	Accept the equivalent approach
6	T/Aids Couters/stones/bottle tops Container – cap/tin -Repeat the concept number 1 to 5 by counting and recognition -Count 5 stones and place in the container	 1	

	-Remove one at a time until no one stone is let. -Confirm wit the class that the container is empty then say that <u>empty</u> space is represented by zero (0).	1 <u>1</u> 3	
7	TA: Counters –sticks, bottle tops, stones, seeds for BMF -Describe relating it to repeated addition.	1 <u>2</u> 3	
8	(a) Any word problem on ratio to test mastery o decreasing q quantity using ratio. (b) Correct solution of the word problem set with the ticks show at the appropriate stages	2 <u>2</u> 4	
9	-Mention of the stage -Name of the fixed unit -Activity involving fixed unit -Activity using the std unit (meter)	1 1 1 3	
10	-Measure circumference and diameter of cylindrical objects -Divide circumference by diameter to get p_i, $\frac{C}{D} = \pi$	1 1 <u>2</u>	
11	T/Aids – Equal circular cutouts -Take two circular cutouts and fold one in two equal parts and the second one in 4 equal parts. -Cut to get ½ and a ¼ parts -Put ¼ portion out of ½ portion and tell which one is greater by size. ½ ¼	 1 1 1 3	
12	-Arrange 38 on abacuss as 3 tens and 8 ones -Represent 26 as 2 tens and 6 ones on same abacus. -Add 6 ones to 8 ones to get 14 ones. -Regroup as 1 ten and 4 ones -Add 2 tens to 3 tens to get 5 tens -Add the 1 ten to 5 tens to get 6 tens; 38 + 26 = 64	1 1 1 1 <u>4</u>	
13	-Let x be the distance, then Time = $\frac{x}{8}$ -Walking back - $\frac{x}{6}$ Total time taken $= \frac{x}{8} + \frac{x}{6} = \frac{3x + 4x}{24}$ $= \frac{7x}{24}$ Total distance 2x	 1 1	

	A.spd = $\frac{2x}{7/24} = 2x + \frac{24}{7} = \frac{48x}{7}$ Km/hr	1 3	
14	-Draw line QR = 7cm -identify point P, 6cm from Q and 6cm from R -join PQ and PR	1 1 1 1 4	
15	Material -Cardboard, pins, felt pens 1. cut circular card and label 12 equal intervals round 2. make two hands, one short or hours and long one for minutes. 3. use a pin to stick the two hands at the middle of the face which should be movable.	 1 1 1 3	
16	-Draw and represent 10 x 10 square grid -Express a number of square units in the grid in terms of the total. These square units may be referred to as hundreds. Introduce the percentage sign (%) to mean a hundredths. e.g $\frac{15}{100}$ = 15 hundredths = 15% Meaning is percent -Conclude that (%) mean is every hundred.	1 1 1 3	
17	- the breadth be y cm Then the length is 2ycm -Perimeter = 2(y+2y)cm 2(y+2y) = 42 6y =42 Y = 7cm Hence length = (2x7)cm =14 2ycm  	 1 1 2	
18	-Draw a triangle	1	

	-Cut off the angles and arrange them on a straight line -if they form a straight line then the sum is 180^0	1 1 3	
19	-Collect like terms together 3a + a = 9 – 3 2a = 6 -Divide through by 2 a = 6/2 = 3	1 1 2	
20	Writing 90m to 30cm Without converting metres into cm.	2	Accept the equivalent
21	**SECTION B 40 MARKS** (a) Area – surface covered by an object – a bounded space in two dimension (b) Previous knowledge 1. Addition 2. Multiplication (c) –Given the space, –Divide it into rows and columns (squares) –Count the number of unit squares. - Express the area as the number of unit square. (d) Any well construction question and solved.	2 2 1 1 2 1 1 1 1 4 2	
22	(a) By the end of the lesson, the learner should be able to convert improper fractions into mixed numbers. (b) Any relevant T/learning aid (c) –meaning/recognition of fractions (fraction as part of a whole /group) -Equivalent/comparison of fraction different names for one. -Operations o fraction (-----) simplifying reactions by cancelling. (d) –fold/cut the cutouts into thirds. -count 11 thirds to show 11/3 -Group 3 thirds to form one whole, count the number of 3 thirds up to 11 thirds, 9 thirds make 3 Wholes 2 thirds remain. -Conclude that 11 thirds make 3 wholes and 2 thirds i.e. 11/3 = 3 2	1 1 1 1 1 1 1 2 1	

	3	10	
23	(a) (i) The amount of money more than the buying price that one gets after selling an item is called profit. -Percentage profit is profit expressed as a percentage of the cost price (ii) The amount of money one loses after selling an item is called loss. -percentage loss is loss expressed as a percentage of the cost price. (b) Any word problem that requires calculation of percentage profit -Explanation of the problem (c) Award problem testing calculation of percentage loss (d) Expressing the loss as fraction of the selling price	2 1 2 2 2 1 10	
24	Stage I: Subtraction involving basic addition facts (17-6) - Take 17 counters, remove 9 counters from the given group - Count how many remain. Stage 2: Subtraction without borrowing 67 – 26. - Place 6 bundles of ten sticks in tens tin and 7 loose ones in the ones tin. - Remove 6 loose sticks from ones tin and 2 bundles of ten sticks from tens tin. - Count how many remained. Stage 3: Subtraction involving borrowing e.g. 41-16 - Place 4 bundles of 10 sticks in the tens tin and one stick in the ones tin. - Explain that it's not possible to take away 6 sticks from ones tin since there is only one stick. - Remove one bundle of ten sticks from the tens tin to remain with three bundles. - Untie this bundle ad place the sticks in the ones tin to make eleven sticks. - Take away six sticks from the eleven sticks - Take away one bundle of ten sticks from the tens tins. - Count the number of bundles and loose sticks that have remained.	1 2 1 2 1 1 1 1 10	
25	(a) -It's a problem solving activity.		

	- It develops clinical thinking learner - It helps learners to use and acquire a variety of skills. (b) Any one project related to Mathematics. (c) –Choose the title of the project. -state the problem to be investigated -decide on the study area. - Choose the target group - State the objective/purpose of the study - Choose the methods of collecting the information - Decide on how the information would be presented and analyzed.	2 1 1 1 1 1 1 1 1 10	