CLASS: X	INDIAN SCHOOL MUSCAT FIRST PERIODIC TEST	SUBJECT: MATHEMATICS
	SET - A	
Q.NO.	**VALUE POINTS**	**SPLIT UP OF MARKS**
	SECTION A	
1.	No Solution	1
2.	Intersecting Graphs	1
3.	Not an A.P. ; No common difference between the terms	1
4.	5.4 cm	1
5.	15	1
6.	x = 4	1
	SECTION B	
7.	Condition/ Substitution/ Getting the values/ choosing x = 6 rejecting all other values	½ each
8.	Formula/ substitution/ n = 26/ yes	½ each
9.	Proving similarity with criterion/ ratio and cross multiplication	1 each
10.	Two ratios using BPT/ Equating the ratios and using converse of BPT to prove parallel	1 each
11.	Relation Substitution d = 1	½ 1 ½
12.	Figure Relation using Pythagoras theorem Substitution BC=AC and simplification	½ 1 ½
	SECTION C	
13.	(a) Equating coefficients Solving x = a, y = b (b) Assumptions Getting the equations x + y = 10 and x – y = 2 Solving to get x = 6 and y = 4 Final statement with correct units	1 1 1 ½ 1 1 ½
14.	Adding the equations and simplifying to get x + y = 5 Subtracting the equations and simplifying to get x – y = 1 Solving for x = 3 and y = 2	1 1 1
15.	Assumptions Framing equations 3x – y = 3 and 4x – y = 8 Solving for x and y Fraction = 5/12	½ 1 1 ½
16.	(a) a+7d = 0 Getting $a_{38} = 30d$ and $3a_{18} = 30d$ (b) a+2d = 4 and a+8d = - 8 Solving and getting a = 8 and d = - 2 Equating a_n to 0 and getting n = 5	½ 1½+1 1 1 1

17.	$a = 121$, $d = -4$ and $a_n < 0$ Substitution and simplification $n > 31¼ \Rightarrow 1^{st}$ –ve term = 32^{nd} term	1 1 1
18.	$a = 1$, $d = 1$, formula (i) Substitution and getting sum as 500500 (ii) Substitution and getting sum as $\frac{n(n+1)}{2}$	1 1 1
19.	(a) Proving the first similarity and getting the relation Similarly second relation Adding and simplifying to get the answer (b) Getting the two Pythagoras relations Adding and farming the third relation Hence right angle by converse of Pythagoras theorem	1+½ ½ 1 1+½ 1 ½
20.	First relation by Corollary of BPT Similarly second relation Equating and cross multiplying to get the result	1+½ 1 ½
21.	(a) First similarity and ratio of corresponding sides and cross multiplying Similarly second relation Taking the ratio (b) Figure and distances from the data Solving the right triangle Final answer = $300\sqrt{31}$ km	1+½ 1 ½ ½+1 1 ½
22.	Getting $a_1 = 7$; $a_2 = 13$; $d = 6$; A.P. as 7, 13, 19, … Getting $a_n = 6n + 1$	½+½+½+½ 1
	SECTION D	
23.	Checking and finding consistent Table of solutions and graph for each equation Therefore $x = 6$ and $y = 0$ is the solution	½ 1½ each ½
24.	(a) Assumptions Getting equations $9x – 4y = 2000$ and $7x – 3y = 2000$ Solving and getting $x = 2000$ and $y = 4000$ Therefore monthly incomes ₹18000 and ₹14000 (b) Any algebraic method of solving with proper reasoning	1 1+½ 1 ½
25.	Proper Substitution and Reduction to linear equations Solving Re-substitution and getting $x = 4$ and $y = 9$	1 2 1
26.	Obviously A.P. with $a = 23$ and $d = -2$ a_n formula, substitution and getting $n = 10$ S_n formula, substitution and getting answer as 140	1 1½ 1½
27.	Assumption Equations $3x – 5y = 6$ and $2x + 3y = 61$ Solving to get $x = 17$ and $y = 9$ Final statement with proper units	½ 1+1 1 ½

28.	(a) Given/ To prove/ Figure/ Construction Proof (b) Given/ To prove Construction Proving similarity and taking ratios of corresponding sides Taking area ratio and substituting to get the relation	½ each 2 ½+½ ½ 1½ 1
29.	(a) Obviously A.P. with a = 3 and d = 3 and n = 12 S_n formula, substitution and getting answer as 234 Value (b) a = - 15, d = 2, formula Substitution and solving to get n = 11, 5 Explaining double answer	1 2 1 1 2 1
30.	Given/ To prove/ Figure/ Construction Proof	½ each 2