INDIAN SCHOOL MUSCAT

HALF YEARLY EXAMINATION

SET C

SEPTEMBER 2019

CLASS IX

Marking Scheme –MATHEMATICS

Q.NO.	Answers **Set C**	Marks (with split up)
1	SECTION A (20 x 1= 20) . (d) 57°	1m each For qns. 1-20
2	(c) $\sqrt{2}\,x^2 - 3x + 6$	
3	(c) 120°	
4	(d) -1	
5	(b) 1	
6	(a) x-axis	
7	(b) B and D	
8	0.32010010001…	
9	(b) ΔCBA≅ΔPRQ	
10	(d) quadrants I and IV	
11	(4, 5)	
12	9991	
13	1/3	
14	55°	
15	60°	
16	a= -5	
17	66°	
18	0.3162	
19	QR	
20	P= 14	
21	SECTION –B (6 x 2 = 12) Same as set A q.no.25	
22	$9a^2+4b^2+25c^2 - 12ab - 20bc + 30ac$ (OR) $(x+y+z)^2 = x^2 + y^2+z^2 +2(xy +yz +zx)$ substituting the given values and we get $x^2 + y^2+z^2 =35$	
23	(0, 0) (-5, 0)	1 each
24	-2x +5y+1=0, 3x -8 =0	1 each

25	Let x=2.3777… 10x=23.777… 100x=237.777… solving, we get x = 107/45	1 each step
26	Given, to prove and proof	
	<u>SECTION – C (8 x 3 = 24)</u>	
27	Construction – no. line	
28	a, c, e are irrationals, b, d, and f are rationals	
29	By remainder thm. f(3) = g(3) 27a +36 +9 -4 = 27 -12 +a By Solving, we get a = -1 (OR) Same as set B Q.no. 32	
30	y + 2y + 69 = 180° (linear pair) solving we get y = 37° 37° + x + x + 13° = 180° (angle sum property of a triangle) Implies x = 65° Therefore, the angles are 37°, 65° and 78°	
31	In ΔABC, AB = AC implies $\angle B = \angle C$ In ΔABE and ΔACD $AB = AC$ $\angle B = \angle C$ $BE = CD$ Therefore , $\Delta ABE \cong \Delta ACD$ (By SAS $\cong$ RULE) $AE = AD$ (CPCT)	
32	Given, to prove, construction and proof.	
33	Let the numbers be x and y Y = 3x (1, 3), (2, 6), (3, 9) or any other solutions….	
34	(i) $(4z/3 - 1)^3$ (ii) (6a -√2b) ($36a^2$ – 6-√2ab + 2^2)	
	<u>SECTION- D (6 X 4 = 24)</u>	
35	Rationalizing the denominator and on simplification we get a = 0 and b = -1	
36	x = 1 is a zero of the polynomial, quotient is x^2 +5 x+6 using splitting the middle term we get, (x+2) (x +3) (x -1)	
37	Any three solutions Pt.(3, -2) does not lie on the graph.	
38	Given, figure, to prove and proof. (OR) $\angle QPS + x = \angle RPT$ $\angle QPS = 40°$ $\angle QPS + x + x + 30° = 90°$ On solving we get $x = 10°$	
39	Given, figure, to prove and proof.	
40	After plotting the points on the graph, we get trapezium and its area = 15 sq. units.	