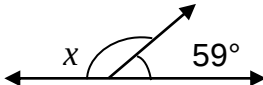
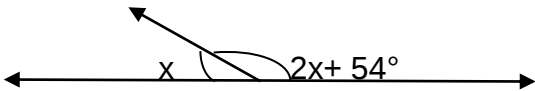


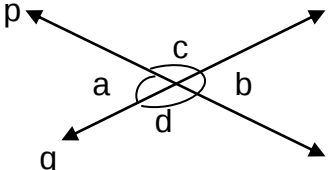
	INDIAN SCHOOL MUSCAT MIDDLE SECTION HALF YEARLY EXAMINATION 2019-20	
	<u>SUBJECT – MATHEMATICS</u>	Code:MXM11
CLASS 7	ANSWER KEY	Time Allotted: 2 ½ hrs
30.09.2019		Max .Marks: 80

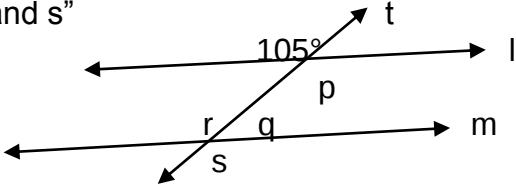
Q.NO1	<u>SECTION ‘A’-(‘1’ MARK EACH) – TOTAL – 20 MARKS</u>	Marks
	<u>MULTIPLE CHOICE QUESTIONS-(‘1’ MARKS EACH) – TOTAL – 10 MARKS</u>	
(a)	The complementary angle of 65° is _____ Ans: c) 25°	1
(b)	$(-403) \div (-403) =$ _____ Ans: a) 1	1
(c)	$\frac{2}{7} \div \frac{4}{-7} =$ _____ Ans: b) $-\frac{1}{2}$	1
(d)	$(10^3)^4 =$ _____ Ans : a) 10^{12}	1
(e)	The additive inverse of (-3) is _____ Ans: b) +3	1
(f)	The product of the numerical coefficients in the monomials $4p^2q$ and $-3p^2q$ is _____ Ans: d) -12	1
(g)	Which angle is 30° less than its supplement? Working: $x + x - 30^\circ = 180^\circ$ $x = 105^\circ$ Ans:c) 105°	1
(h)	The co-efficient of x^2 in $-x^2pq$ is _____ Ans:b) - pq	1
(i)	$(-3) \times (-4) \times (-2) =$ _____ Ans: a) -12	1
(j)	If $\frac{y}{4} - 3 = 13$, then y is equal to _____ Ans: c) 64	1
	<u>(‘1’ MARK QUESTION) – TOTAL – 10 MARKS</u>	
(k)	Simplify : $(-35) - 62 - (-43)$ Ans: $-35 - 62 = -97$ $-97 + 43 = -54$	$\frac{1}{2}$ $\frac{1}{2}$
(l)	Write $\frac{38}{-56}$ in standard form. Ans: $-\frac{19}{28}$	1
(m)	Solve $3x + 2 = 11$ Ans: $3x = 11 - 2$ $3x = 9$ $x = 3$	$\frac{1}{2}$ $\frac{1}{2}$

(n)	Write two rational numbers equivalent to : $-\frac{7}{4}$ Ans: $-\frac{14}{8}$, $-\frac{21}{12}$	$\frac{1}{2}$ $\frac{1}{2}$
(o)	Multiply $-\frac{60}{21}$ by $\frac{7}{30}$ Ans: $-\frac{2}{3}$	1
(p)	Simplify ($7^{20} \div 7^{15}$) Ans= $7^{20-15} = 7^5$	$\frac{1}{2}$ $\frac{1}{2}$
(q)	$\frac{x}{6} = \frac{5}{3}$ Find the value of x . Ans: $3x = 30$ $x = 10$	$\frac{1}{2}$ $\frac{1}{2}$
(r)	Find the value of 'x' in the given figure  Ans: $x + 59^\circ = 180^\circ$ $x = 121^\circ$	$\frac{1}{2}$ $\frac{1}{2}$
(s)	Express 3905708 in scientific notation Ans: 3.905708×10^6	$\frac{1}{2}$ $\frac{1}{2}$
(t)	Find the sum of $3a + b$; $5a - 2b$ Ans: $3a + b$ $\underline{5a - 2b}$ $\underline{8a - b}$ arrangement $\frac{1}{2}m$ answer $\frac{1}{2}m$	$\frac{1}{2}$ $\frac{1}{2}$

Q.NO	<u>SECTION 'B'-('2' MARKS EACH) – TOTAL – 12 MARKS</u>	Marks
(2)	Identify the smaller number 2^6 or 6^2 Ans: $2^6 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 64$ $6^2 = 6 \times 6 = 36$ $64 > 36$ $2^6 > 6^2$ 6^2 is smaller	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$

(3)	Solve $5x - 6 = 4x - 2$ Ans: $5x - 4x = -2 + 6$ $x = 4$	1 1
(4)	Find the value x in the given figure  Ans: $x + 2x + 54^\circ = 180^\circ$ $3x + 54^\circ = 180^\circ$ $3x = 180^\circ - 54^\circ$ $3x = 126^\circ$ $x = 42^\circ$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
(5)	Find the sum $(\frac{-4}{5}) + \frac{2}{3}$ Ans: LCM = 15 $\frac{-12}{15} + \frac{10}{15}$ $\frac{-2}{15}$	$\frac{1}{2}$ 1 $\frac{1}{2}$
(6)	Find the product using suitable property : $(-7) \times (-125) \times (8) \times (-6)$ Ans: $(-125) \times (8) = -1000$ $(-7) \times (-6) = 42$ -1000×42 $= -42000$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
(7)	Identify the terms and their factors by factor tree. $-3a^2b + 7ab^2$ Ans: Terms: $-3a^2b$, $7ab^2$ Factors: $-3, a, a, b$ $7, a, b, b$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
Q.NO	<u>SECTION 'C'-('3' MARKS EACH) – TOTAL – 24 MARKS</u>	Marks
(8)	Write 968 in power notation using prime factorization Ans: $\begin{array}{r l} 2 & 968 \\ 2 & 484 \\ 2 & 242 \\ 11 & 121 \\ 11 & 11 \\ & 1 \end{array}$ $968 = 2^3 \times 11^2$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
(9)	The sum of two vertically opposite angles is 156° . Find each of the angles. Ans: $x + x = 156^\circ$ (vop are equal) $2x = 156^\circ$ $x = 156^\circ \div 2$ $x = 78^\circ$	1 $\frac{1}{2}$ 1 $\frac{1}{2}$

(10)	Which is greater : $[-15 + (-43)] \times 7$ or $[-17 + (-34)] \times 5$ Ans: $-15 - 43 = -58$ $-17 - 34$ $-58 \times 7 = -406$ $-51 \times 5 = -255$ $-406 < -255$ $[-17 + (-34)] \times 5$ is greater	$\frac{1}{2} + \frac{1}{2}$ $\frac{1}{2} + \frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
(11)	Find the value of m. $5^{-3} \times 5^6 = 5^{2m-1}$ Ans: $5^{-3+6} = 5^{2m-1}$ $5^3 = 5^{2m-1}$ $3 = 2m - 1$ $2m = 3 + 1$ $2m = 4$ $m = 2$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
(12)	In the figure given p and q are intersecting lines. If $a = 48^\circ$ then find the values of b, c and d  Ans: $b = 48^\circ$ (VOA are equals) $c = 180^\circ - 48^\circ = 132^\circ$ (LP) $d = 132^\circ$ (VOA are equals)	1 1 1
(13)	Subtract $4a^2 - 3a + 12$ from $9a - 6a^2 - 15$ Ans: $-6a^2 + 9a - 15$ $-4a^2 + 3a - 12$ $-10a^2 + 12a - 27$ arrangement $1\frac{1}{2} m$	$1\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
(14)	Write the rational numbers in descending order. $\frac{11}{-20}$, $\frac{-3}{5}$, $\frac{-7}{-15}$, $\frac{2}{5}$ Ans: LCM= 60 $\frac{-33}{60}$, $\frac{-36}{60}$, $\frac{28}{60}$, $\frac{24}{60}$ D.O = $\frac{28}{60}$, $\frac{24}{60}$, $\frac{-33}{60}$, $\frac{-36}{60}$, $\frac{-7}{-15}$ D.O = $\frac{-7}{-15} > \frac{2}{5} > \frac{11}{-20} > \frac{-3}{5}$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$

(15)	Solve $2(3x + 1) - 7 = 13$ Ans: $2(3x + 1) = 13 + 7$ $(3x + 1) = 20 \div 2$ $(3x + 1) = 10$ $3x = 10 - 1$ $3x = 9$ $x = 3$	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
Q.NO	<u>SECTION 'D'-('4' MARKS EACH) – TOTAL – 24 MARKS</u>	Marks
(16)	If $x = 3$, $y = -2$ and $z = -4$ then find the value of $2x^3 - 5y^2 + 3z$ Ans: $2(3)^3 - 5(-2)^2 + 3(-4)$ $2 \times 27 - 5 \times 4 - 12$ $54 - 20 - 12$ $54 - 32$ 22	1 1 1 $\frac{1}{2}$ $\frac{1}{2}$
(17)	A number is multiplied by 3 and then 5 is added to it to get the answer 20. what is the number? Ans : $3x + 5 = 20$ $3x = 20 - 5$ $3x = 15$ $x = 5$	1 1 1 1
(18)	If $l \parallel m$ then find the value of “p, q, r and s”  Ans: $p = 105^\circ$ $q = 75^\circ$ $r = 105^\circ$ $s = 105^\circ$ no reasons cut 1m	1 1 1 1
(19)	Write four rational numbers between $-\frac{2}{7}$ and $-\frac{1}{4}$ Ans: LCM = 28 $\frac{-8}{28}, \frac{-7}{28}$ $\frac{-80}{280}, \frac{-70}{280}$ Any four R.NO between them.	$\frac{1}{2}$ 1 $\frac{1}{2}$ Each $\frac{1}{2}$

(20)	Find the value of $\frac{7^2 \times 27 \times 100}{10^2 \times 3^2 \times 7}$ Ans: $\frac{7^2 \times 3^3 \times 2^2 \times 5^2}{2^2 \times 5^2 \times 3^2 \times 7^1}$ $\frac{7^2 \times 3^3 \times 2^2 \times 5^2}{7^1 \times 3^2 \times 2^2 \times 5^2}$ $7^{2-1} \times 3^{3-2} \times 2^{2-2} \times 5^{2-2}$ $7^1 \times 3^1 \times 2^0 \times 5^0$ 7×3 21 If laws are not written cut 1m	1 ½ 1 ½ ½ ½
(21)	Solve using suitable property and also name it : a) $(-665) \times 22 + (-665) \times 78$ Ans : – 665 common – 665 x (22 + 78) – 66500 Name of the property: distributive property of multiplication over addition b) $133 + 244 + 167 + 56$ Ans: Grouping (133 + 167) + (244 + 56) 300 + 300 600 Name of the property: Associative property of addition	½ ½ ½ ½ ½ ½ ½ ½