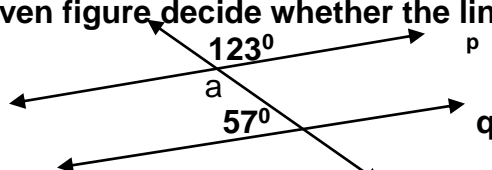


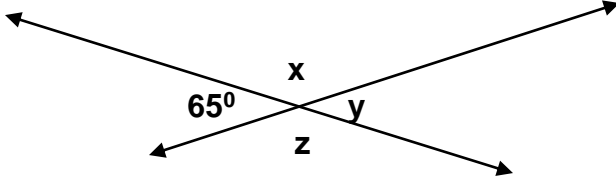
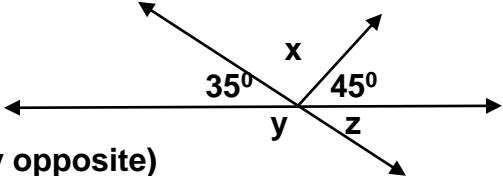


**INDIAN SCHOOL MUSCAT  
MIDDLE SECTION  
FIRST TERM EXAMINATION 2018-19**



**CLASS 7 – MATHEMATICS – ANSWER KEY**

	SECTION A														
1.	Reduce $\frac{28}{-42}$ to standard form .Ans. $\frac{-2}{3}$														
2.	Find the additive inverse of $[(-6) \div (-2)]$ Ans. $(-6) \div (-2) = 3$ Additive inverse = $(-3)$														
3.	Find the standard form of 2603000000.    Ans. $2603000000 = 2.603 \times 10^9$														
4.	Find the fourth term of the expression $(2n - 1)$ . Ans. $4^{\text{th}} \text{ term} = 2 \times 4 + 1 = 9$														
5.	Write the coefficient of y in $(-3x^2yz)$ .Ans. Coefficient of y = $(-3x^2z)$														
6.	Two adjacent angles x and y form a linear pair. What is the measure of x+y ? Ans. $x + y = 180^\circ$														
7.	Solve: $4p - 6 = 18$ Ans. $4p - 6 = 18$ $4p = 24$ $p = 6$														
8.	Compare : $(-6) \times (-3) \times (-1)$ and $[-24 - (-6)]$ Ans. $-6 \times -3 \times -1 = -18$ $-24 - (-6) = -24 + 6 = -18$ $-24 - (-6) = -24$ and $-24 - (-6)$ are equal.														
9.	Add : $2a - 3b + 4$ and $-6b - 2 + 4a$ Ans. $2a - 3b + 4 + -6b - 2 + 4a$ $= 2a + 4a - 3b - 6b + 4 - 2$ $= 6a - 9b + 2$														
10.	In the given figure decide whether the lines p and q are parallel, give reason  Ans. $a = 123^\circ$ (vertically opposite angle) $123^\circ + 57^\circ = 180^\circ$ The lines p and q are parallel. Reason : Co-interior angles are supplementary.														
11.	Represent $\frac{4}{-3}$ on a number line. Ans. Number line with marking . Marking of the number														
12.	Express 540 in exponential form as a product of its prime factors. Ans. <table style="display: inline-table; vertical-align: middle;"> <tr><td>2</td><td>540</td></tr> <tr><td>3</td><td>270</td></tr> <tr><td>3</td><td>90</td></tr> <tr><td>3</td><td>30</td></tr> <tr><td>2</td><td>10</td></tr> <tr><td>5</td><td>5</td></tr> <tr><td></td><td>1</td></tr> </table> (1) $540 = 2 \times 2 \times 3 \times 3 \times 3 \times 5$ $= 2^2 \times 3^3 \times 5$	2	540	3	270	3	90	3	30	2	10	5	5		1
2	540														
3	270														
3	90														
3	30														
2	10														
5	5														
	1														
13.	Evaluate $[30 - (-19)] \div [-19 - (-12)]$ Ans. $30 - (-19) = 30 + 19 = 49$ $-19 - (-12) = -19 + 12 = -7$ $49 \div -7 = -7$														

14.	<p>List four rational numbers between <math>\frac{1}{-3}</math> and <math>\frac{1}{-4}</math>.</p> <p>Ans. <math>\frac{-4}{12}</math> and <math>\frac{-3}{12}</math> <math>\frac{-40}{120}</math> and <math>\frac{-30}{120}</math> Any four rational numbers</p>
15.	<p>Simplify <math>(6^2 \times 6^4) \div (6^2)^3</math> by using laws of exponents.</p> <p>Ans. <math>(6^2 \times 6^4) \div (6^2)^3 = 6^6 \div 6^6 = 6^0 = 1</math></p>
16.	<p>Kavita's father's age is 5 years more than three times Kavita's age. Find Kavita's age, if her father is 44 years old.</p> <p>Ans. Let Kavita's age = x  Father's age = 5 + 3x  <math>5 + 3x = 44</math>  <math>3x = 39</math>  <math>x = 13</math> Kavita's age = 13 years</p>
17.	<p>Find values of the angles x, y and z, write reason to support your answer.</p>  <p>Ans. <math>y = 65^\circ</math> (vertically opposite angle)  <math>x = 180^\circ - 65^\circ = 115^\circ</math> (linear pair)  <math>z = 115^\circ</math> (Vertically opposite angle)</p>
18.	<p>Subtract <math>(14mn - 4m^3 + 3n)</math> from <math>(-12m^3 + 5n - 10mn)</math></p> <p>Ans. <math>(-12m^3 + 5n - 10mn) - (14mn - 4m^3 + 3n)</math>  <math>= -12m^3 + 5n - 10mn - 14mn + 4m^3 - 3n</math>  <math>= -12m^3 + 4m^3 + 5n - 3n - 10mn - 14mn</math>  <math>= -8m^3 + 2n - 24mn</math></p>
19.	<p>(a) Find the product using suitable properties <math>-181 \times 1003</math></p> <p>Ans. <math>-181 \times 1003 = -181 \times (1000 + 3)</math>  <math>= -181000 - 543</math>  <math>= -181543</math></p>
20.	<p>(a) Solve : <math>3(-p + 4) = 15</math></p> <p>Ans. <math>-3p + 12 = 15</math>  <math>-3p = 15 - 12</math>  <math>-3p = 3</math>  <math>p = 1</math></p> <p>(b) Write the equation for "add 5 to twice of p to get 15"</p> <p>Ans. <math>5 + 2p = 15</math></p>
21.	<p>Simplify : <math>(2^0 - 3^2 + 4^0)^2</math> by using laws of exponents.</p> <p>Ans. <math>(1 - 9 + 1)^2 = (-7)^2 = 49</math></p>
22.	<p>(a) Simplify : <math>\left[\frac{-3}{2} + \frac{9}{5}\right] \times \frac{5}{-9} = \left[\frac{-15}{10} + \frac{18}{10}\right] \times \frac{5}{-9} = \frac{3}{10} \times \frac{5}{-9} = \frac{1}{2} \times \frac{1}{-3} = \frac{-1}{6}</math></p> <p>(b) Find the additive inverse of <math>\frac{5}{-7}</math></p> <p>Ans. <math>\frac{5}{7}</math></p>
23.	<p>(a) Find the values of the angles x, y, z, give reason to support your answer</p>  <p>Ans. <math>z = 35^\circ</math> (vertically opposite)  <math>y = 180^\circ - 35^\circ = 145^\circ</math> (Linear pair)</p>

	$x = 180^\circ - 80^\circ = 100^\circ$ (Straight angle) <b>(b) Find the angle which is equal to its supplement.</b> <b>Ans. <math>90^\circ</math></b>
24.	<b>Simplify <math>\frac{7^5 \times 25 \times 10^7}{5^9 \times 14^5}</math> by using laws of exponents.</b> <b>Ans.</b> $25 = 5^2$ $10 = 2 \times 5$ $14 = 7 \times 2$ $\frac{7^5 \times 25 \times 10^7}{5^9 \times 14^5} = \frac{7^5 \times 5^2 \times 5^7 \times 2^7}{5^9 \times 2^5 \times 7^5} = 7^0 \times 5^0 \times 2^2 = 4$
25.	<b>(a) The sum of three times a number and 17 is 35. Find the number.</b> <b>Ans.</b> $3x + 17 = 35$ $3x = 18$ $x = 6$ <b>Solve:</b> $\frac{p}{4} - 7 = 5$ , $\frac{p}{4} = 12$ <b>Ans. <math>p = 48</math></b>
26.	<b>Simplify <math>\left[\frac{1}{2} - \frac{3}{4}\right] \div \left[\frac{-3}{10} \times \frac{5}{8}\right] = \left[\frac{2}{4} - \frac{3}{4}\right] = \frac{-1}{4}</math>   <math>\left[\frac{-3}{2} \times \frac{1}{8}\right] = \frac{-3}{16}</math>   <math>\frac{-1}{4} \div \frac{-3}{16} = \frac{-1}{4} \times \frac{-16}{3} = \frac{-1}{1} \times \frac{-4}{3} = \frac{4}{3} = 1\frac{1}{3}</math></b>
27.	<b>From the sum of <math>3a - 2c + b</math> and <math>-3c + 4b - a</math>, subtract <math>3a - b - 5c</math></b> <b>Ans.</b> Sum = $3a - 2c + b + -3c + 4b - a = 3a - a - 2c - 3c + b + 4b = 2a - 5c + 5b$ <b>Difference = <math>2a - 5c + 5b - (3a - b - 5c) = 2a - 5c + 5b - 3a + b + 5c = 2a - 3a - 5c + 5c + 5b + b = -a + 6b</math></b>
28.	<b>Simplify the expression <math>2(x + y - 3z) - 4x - 3z</math> and find the value if <math>x = (1)</math>, <math>y = 2</math> and <math>z = (3)</math></b> <b>Ans.</b> $2(x + y - 3z) - 4x - 3z = 2x + 2y - 6z - 4x - 3z = 2x - 4x + 2y - 3z - 6z = -2x + 2y - 9z$ $-2x + 2y - 9z = -2 \times 1 + 2 \times 2 - 9 \times 3 = -2 + 4 - 27 = -25$
29.	<b>Find the unknown angles and write reason to support your answer. The lines p and q are parallel.</b> <div style="text-align: center;"> </div> <b>Ans.</b> $c = 75^\circ$ (Vertically opposite) $f = 75^\circ$ (Corresponding angle of c) $a = 105^\circ$ (Linear pair) $b = 105^\circ$ (vertically opposite angle of a) $g = 105^\circ$ (Corresponding angle of b) $d = 105^\circ$ (Corresponding angle of a) $e = 75^\circ$ (Corresponding angle of $75^\circ$ )
30.	<b>(a) Simplify using suitable properties. <math>-1982 \times 16 + (-1982) \times 84</math></b> <b>Ans.</b> $-1982 \times 16 + -1982 \times 84 = -1982 \times (16 + 84) = -1982 \times 100 = -198200$ <b>(b) Name the property used <math>-3 \times 2 = -6</math></b> <b>Ans. closure property of multiplication</b>