



# INDIAN SCHOOL AL WADI AL KABIR

Department of Mathematics, 2020-2021

Class XI

APPLIED MATHEMATICS (241)

26.10.2020

## WORKSHEET- Numerical Applications

<b>Q.1.</b>	<i>If <math>\log(x + 1) + \log(x - 1) = 24</math>, then <math>x</math></i>						
<b>A</b>	1	<b>B</b>	25	<b>C</b>	5	<b>D</b>	None of these
<b>Q.2.</b>	<i><math>2\log 3 - \frac{1}{2}\log 25 + \log 10 = \log x</math>, then <math>x</math></i>						
<b>A</b>	300	<b>B</b>	18	<b>C</b>	750	<b>D</b>	150
<b>Q.3.</b>	<i>If <math>9^{2x} = \frac{1}{81}</math>, then <math>x</math></i>						
<b>A</b>	1	<b>B</b>	$\frac{1}{2}$	<b>C</b>	-1	<b>D</b>	None of these
<b>Q.4.</b>	<i>If <math>\log_{0.5}(64) = x</math>, then <math>x</math></i>						
<b>A</b>	-6	<b>B</b>	-4	<b>C</b>	6	<b>D</b>	4
<b>Q.5.</b>	The value of $\frac{\log 27 - \log 3}{\log 243}$						
<b>A</b>	$\frac{1}{4}$	<b>B</b>	$-\frac{2}{5}$	<b>C</b>	$\frac{1}{3}$	<b>D</b>	$\frac{2}{5}$
<b>Q.6.</b>	The angle between two hands of a clock at 8:30am is						
<b>A</b>	$75^\circ$	<b>B</b>	$80^\circ$	<b>C</b>	$85^\circ$	<b>D</b>	$45^\circ$
<b>Q.7.</b>	The average of 100 numbers is 50. If one of the number which was 50 is replaced by 150, the new average will be						
<b>A</b>	101	<b>B</b>	51	<b>C</b>	50.5	<b>D</b>	49.5

<b>Q.8.</b>	What was the day on 15 <sup>th</sup> August, 1947?							
	<b>A</b>	Friday	<b>B</b>	Saturday	<b>C</b>	Sunday	<b>D</b>	Monday
<b>Q.9.</b>	The average marks of 15 students is 45. If average marks of first 8 students is 48 and that of the last 8 students is 42. Then the marks obtained by the 8 <sup>th</sup> student is							
	<b>A</b>	42	<b>B</b>	48	<b>C</b>	46.5	<b>D</b>	45
<b>Q10.</b>	A clock loses 5 minutes every hour and was set right at 9:00am on Sunday. When it will show the correct time again?							
	<b>A</b>	8:00am Friday	<b>B</b>	9:00am Saturday	<b>C</b>	10:00am Sunday	<b>D</b>	11:00am Monday
<b>Q11.</b>	A can do a piece of work in 10 days. B can do the same work alone in 15 days. If they work together. Then the number of days to finish the work is							
	<b>A</b>	4days	<b>B</b>	5 days	<b>C</b>	6days	<b>D</b>	8 days
<b>Q12.</b>	Two trains running opposite directions at the speed of 36km/h and 54km/h crosses each other in 8 seconds. If the length of first train is 80m, then the length of the second train is							
	<b>A</b>	90m	<b>B</b>	100m	<b>C</b>	110m	<b>D</b>	120m
<b>Q13.</b>	Taps A and B can fill a tank in 2 hours and 3 hours respectively and tap C can empty it in 6hours. If all the three taps are opened together when the tank is empty, then time required to fill the tank is							
	<b>A</b>	1 hour	<b>B</b>	1 hour 30 minutes	<b>C</b>	2 hours	<b>D</b>	3 hours
<b>Q14.</b>	If a man covers a distance at 4km/h in 3 hours 30 minutes, then the time required to cover the same distance at 21km/h is							
	<b>A</b>	1 hour	<b>B</b>	2 hours	<b>C</b>	40 minutes	<b>D</b>	1 hour 20 minutes
<b>Q15.</b>	A is twice efficient as B. They together can finish a piece of work in 50 days. In how many days B can finish the same work alone?							
	<b>A</b>	150 days	<b>B</b>	75 days	<b>C</b>	80 days	<b>D</b>	160 days
Read the following information carefully and answer the questions given below. (V. S. A. – 1mark each)								
Eight friends A, B, C, D, E, F, G and H are sitting in a row. E is at one end of the row. B is seated adjacent to F and E. C is to the immediate right of D and at fourth place to the right of A. H is immediate left of G. G is at fifth place to the left of E.								
<b>Q16.</b>	Write the seating arrangement.							

<b>Q17.</b>	If E is at one end of the row, who is at other end of the row?
<b>Q18</b>	What is the position of C w.r.t. E?
<b>Q19.</b>	Write the neighbors of D.
<b>Q20.</b>	If all of them are allowed to sit alphabetically, then the positions of how many friends will remain unchanged?

<b>ANSWERS</b>									
<b>1.</b>	C	<b>2.</b>	B	<b>3.</b>	C	<b>4.</b>	A	<b>5.</b>	D
<b>6.</b>	A	<b>7.</b>	B	<b>8.</b>	A	<b>9.</b>	D	<b>10.</b>	B
<b>11.</b>	C	<b>12.</b>	D	<b>13.</b>	B	<b>14.</b>	C	<b>15.</b>	A
<b>16.</b>	AHGDCFBE		<b>17.</b>	A	<b>18.</b>	3 <sup>rd</sup> to the left		<b>19.</b>	G and C
<b>20.</b>	3								

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