INDIAN SCHOOL AL WADI AL KABIR

Class VIII, Mathematics

WORKSHEET (MCQ) – LINEAR EQUATIONS IN ONE VARIABLE

Multiple Choice questions

Q.1. The digit in the tens place of a two-digit number is 3 more than the digit in the unit place. Let the digit at the unit place be 'b'. Then the number is

	A	11b + 30	B	10b + 30	C	11b + 3	D	$10b + 3$

Q.2. Which of the following is a linear expression?

	A	$y^2 + 13$	B	$z + z^2$	C	4	D	$1 + x$

Q.3. The solution of $\mathbf{2x - 3 = 7}$ is,

	A	2	B	-2	C	5	D	-5

Q.4. Solve: $\mathbf{6x = 12}$

	A	2	B	-2	C	3	D	None of these

Q.5. Find the solution of $\frac{x+6}{4} + \frac{x-3}{5} = \frac{5x-4}{8}$.

	A	-8	B	8	C	4	D	None of these

Q.6. The perimeter of a rectangle is $\mathbf{13}$ cm and its width is $\mathbf{2\frac{3}{4}}$ cm. Find its length in cm.

	A	$2\frac{3}{4}$	B	$-3\frac{3}{4}$	C	$3\frac{3}{4}$	D	None of these

Q.7.

Sasha solves a linear equation.
Her work is shown below.

$2x - 3 = \frac{x}{2} - 5$

$2(2x - 3) = x - 5$ ..... Step 1

$4x - 6 = x - 5$ ..... Step 2

$4x - x = 6 - 5$ ..... Step 3

$3x = 1$ .....Step 4

$x = \frac{1}{3}$

Is Sasha's solution correct? If not, in which step did Sasha make an error?

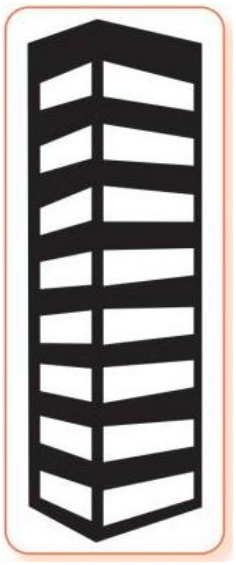
	A	Yes, solution is correct.	B	No, Step 3 is wrong.	C	No, Step 2 is wrong.	D	No, Step 1 is wrong.
Q8.	The shifting of a number from one side of an equation to the other is called_____.							
	A	Transposition	B	Commutativity	C	Distributivity	D	Associativity
Q9	Three consecutive integers add up to 51. What are these integers?							
	A	$117, 121, 125$	B	$110, 121, 132$	C	$110, 99, 154$	D	None of these
Q10	If $\frac{4}{9} \times \mathbf{x} = \frac{16}{85}$, the value of x is							
	A	$\frac{31}{85}$	B	$\frac{36}{85}$	C	$\frac{34}{85}$	D	$\frac{32}{85}$
	Source Based Question: It is common that Governments revise travel fares from time to time based on various factors such as taxes, economy and inflation (a general increase in prices and fall in the purchasing value of money) on different types of vehicles like auto, rickshaws, taxis, Radio cab etc. The auto and taxi charges in a city comprise of a fixed charge and the charge for the distance covered. Few situations are given below in the form of questions. Find the correct options. 							
Q11	If the fixed charge in a city is **Rs.x** and charge per km is **Rs.5** and total fare is **Rs.60**, then find the linear equation for the journey of 10 km.							
	A	$x + 50 = 60$	B	$x - 50 = 60$	C	$x + 50 = 50$	D	None of these
Q12	In the above question what is the value of fixed charge?							
	A	Rs 20	B	Rs 5	C	Rs 10	D	Rs 15
Q13	If in a city a person has to pay **Rs 110** for a journey of **15 km** and fixed charge is **Rs 20**, then the charge per km is?							
	A	Rs 12	B	Rs 6	C	Rs 8	D	No fixed charge

Q14	If in a city fixed charge is double of the charge per km and a person paid **Rs 75** for a journey of **1 km**, then the linear equation for the following situation is:							
	A	$3x = 75$	B	$2x = 75$	C	$2x - x = 75$	D	None of these
Q15	If in a city, for a journey of **8 km**, the charge paid is **Rs.91** and for a journey of **14 km**, the charge paid is **Rs.145**, then what will a person have to pay for travelling a distance of **30 km**?							
	A	Rs.185	B	Rs.289	C	Rs.275	D	Rs.327

Q16

CASE STUDY:

Akhil's office in a high-rise building was on a floor that had as many floors above it as below. One day he went up 7 floors from his office, then down 4 floors and finally up 9 floors. He was at the top floor now.



I. How many floors did the building have in total?

II. If $\frac{5x}{3} - 4 = \frac{2x}{5}$,then find the numerical value of $2x - 7$.

III. Find the value of x: $4x - 8 = 3x$.

ANSWERS

1.	A	2.	D	3.	C	4.	A
5.	B	6.	C	7.	D	8.	A
9.	D	10.	B	11.	A	12.	C
13.	B	14.	A	15.	D	16.	I. No. of floors=25 II. $-\frac{13}{19}$ III. 8