


# INDIAN SCHOOL AL WADI AL KABIR



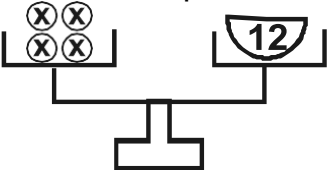
**Class VI**, Mathematics

## Worksheet 1- ALGEBRA (with answer)

### OBJECTIVE TYPE (1 Mark)

<b>Q.1.</b>	Which of the following is an algebraic expression?						
<b>A</b>	2	<b>B</b>	$xy$	<b>C</b>	2+5	<b>D</b>	none of these.
<b>Q.2.</b>	No. of matchsticks are use in a pattern of letter F						
<b>A</b>	4	<b>B</b>	10	<b>C</b>	12	<b>D</b>	2
<b>Q.3.</b>	There is some expression given below. Which of these is an equation with variable.						
<b>A</b>	$x - 5 > 9$	<b>B</b>	$8+5 = 9$	<b>C</b>	$9x < 5$	<b>D</b>	$2x + 1 = 15$
<b>Q.4.</b>	If Maya's present age is $x$ years then what will be her age two years ago.						
<b>A</b>	$x + 2$	<b>B</b>	$x + 5$	<b>C</b>	$x - 2$	<b>D</b>	$x$
<b>Q.5.</b>	Which of the following represent $6 \times b$ ?						
<b>A</b>	$6b$	<b>B</b>	$\frac{6}{b}$	<b>C</b>	$6 + b$	<b>D</b>	$6 - b$
<b>Q.6.</b>	If $x$ takes the value 2, then the value of $x + 10$ is						
<b>A</b>	20	<b>B</b>	12	<b>C</b>	5	<b>D</b>	8
<b>Q.7.</b>	Which of the following equations has $x = 2$ as a solution?						
<b>A</b>	$x + 2 = 5$	<b>B</b>	$x - 2 = 0$	<b>C</b>	$2x + 1 = 0$	<b>D</b>	$x + 3 = 6$
<b>Q.8.</b>	For any two integers $x$ and $y$ , which of the following suggests that operation of addition is commutative?						
<b>A</b>	$x + y = y + x$	<b>B</b>	$x + y > x$	<b>C</b>	$x - y = y - x$	<b>D</b>	$xy = yx$
<b>Q.9.</b>	In algebra, letters may stand for						
<b>A</b>	known quantities	<b>B</b>	unknown quantities	<b>C</b>	fixed numbers	<b>D</b>	None of these
<b>Q.10</b>	The expression obtained when $x$ is multiplied by 2 and then subtracted from 3 is						
<b>A</b>	$2x - 3$	<b>B</b>	$2x + 3$	<b>C</b>	$3 - 2x$	<b>D</b>	$3x - 2$
<b>Q.11</b>	Kanta has $p$ pencils in her box. She puts $q$ more pencils in the box. The total number of pencils with her are						
<b>A</b>	$p + q$	<b>B</b>	$pq$	<b>C</b>	$P - q$	<b>D</b>	$\frac{p}{q}$
<b>Q.12</b>	Think of a number and on adding 13 to it, I get 27. Equation for this is						
<b>A</b>	$x - 27 = 13$	<b>B</b>	$x - 13 = 27$	<b>C</b>	$x + 27 = 13$	<b>D</b>	$x + 13 = 27$

<b>Q.13</b>	If a notebook costs Rs. $p$ and a pencil costs Rs. 3, then the total cost (in Rs.) of two notebooks and one pencil is																			
	<b>A</b>	$5 + p$	<b>B</b>	$6 + p$	<b>C</b>	$2p + 3$	<b>D</b>	$3p + 2$												
<b>Q.14</b>	$p$ is divided by 11 and the result is added to 10.																			
	<b>A</b>	$\frac{p}{11} = 10$	<b>B</b>	$\frac{p}{11} > 10$	<b>C</b>	$\frac{p}{11} + 10 = 0$	<b>D</b>	$\frac{p}{11} + 10$												
<b>Q.15</b>	Translate each of the following statements into an equation. "The diameter ( $d$ ) of a circle is twice its radius ( $r$ )."																			
	<b>A</b>	$d = 2 + r$	<b>B</b>	$d = 2 - r$	<b>C</b>	$d > 2 + r$	<b>D</b>	$d = 2r$												
<b>Q.16</b>	Which of the following is an equation?																			
	<b>A</b>	$x - 3 > 0$	<b>B</b>	$x + 3 < 0$	<b>C</b>	$x$	<b>D</b>	$x + 3 = 0$												
<b>Q.17</b>	The number of rooms on the ground floor of a building is 12 less than the twice of the number of rooms on first floor. If the first floor has $x$ rooms, how many rooms does the ground floor has?																			
	<b>A</b>	$y = 2x - 2.$	<b>B</b>	$y = 2x + 12.$	<b>C</b>	$y = 2x - 12.$	<b>D</b>	$y = 2x$												
<b>Q.18</b>	A starts his car from Delhi at 6.00 am to Amritsar. The uniform speed of his car is $x$ km/h. At 12.00 noon, he finds that he is still 50 km away from Amritsar. Find the distance between Delhi and Amritsar.																			
	<b>A</b>	$(6x \times 50)$ km	<b>B</b>	$(6x - 50)$ km	<b>C</b>	$(6x + 50)$ km	<b>D</b>	$6x$ km												
<b>Q.19</b>	Here is a pattern of houses with matchsticks: S  Write the general rule for this pattern.																			
	<b>A</b>	$6 + h$	<b>B</b>	$6 - h$	<b>C</b>	$6h$	<b>D</b>	None of these												
<b>Q.20</b>	If $m$ is a whole number less than 5, complete the table and by inspection of the table, find the solution of the equation $2m - 5 = -1$ . <table border="1" data-bbox="227 1365 1104 1491"> <tbody> <tr> <td><math>m</math></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><math>2m - 5</math></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								$m$						$2m - 5$					
$m$																				
$2m - 5$																				
<b>Q21.</b>	Pick out the solution from the value given in the brackets against each equation. (i) $5n = 60$ (5, 15, 12) (ii) $a + 12 = 18$ (10, 6, 4)																			
<b>Q22.</b>	Translate each of the following statements into an equation, using $x$ as the variable. (a) 13 subtracted from twice a number gives 3. (b) Two-third of a number is 12. (c) 9 added to twice a number gives 13. (d) 1 subtracted from one-third of a number gives 1.																			

<p><b>Q23.</b></p>	<p><b>Case study: Ravi went to the market to purchase some household items. He asks the shopkeeper the prices of different items,</b> If the cost of a bread loaf is ₹ 'x', find the cost of:</p> <p>a) butter which is ₹8 more than the cost of the bread loaf.  b) 1 litre milk that is 3 times the cost of the bread loaf.  c) 1 kg rice that is ₹ 75 more than twice the cost of the bread loaf.  d) Price of an Apple juice can is 3 more than <math>\frac{1}{2}</math> of the cost of the bread loaf.  d) a pen that costs ₹ 15 less than four times the cost of the bread loaf.</p>	
<p><b>Q24.</b></p>	<p><b>Case study: Sarita went to her grandparents' house. She was curious to know the ages of different members of her family.</b>  If Sarita's present age is 'y' years then,</p> <p>(i) her grandfather's age is 8 times of her age  (ii) her grandmother is 2 years younger than grandfather.  (iii) Her father's age is 30 years more than her age.  (iv) Mother's age is 3 years less than that of her father  (v) Her brother is two years younger.</p>	
<p><b>Q25.</b></p>	<p>Observe the picture and answer the following questions</p>  <p>1. Write equation for the given picture.  2. What be solution of the equation.</p>	

<b>Answers</b>	
Q20	m = 2
Q21	(i) n = 12 (ii) a = 6
Q22	(i) $2x - 13 = 3$ , (ii) $\frac{2x}{3} = 12$ , (iii) $2x + 9 = 13$ , (iv) $\frac{x}{3} - 1 = 1$
Q23	(a) $x + 8$ (b) $3x$ (c) $2x + 75$ (d) $3 + \frac{x}{2}$ (e) $4x - 15$
Q24	(i) $8y$ (ii) $8y - 2$ (iii) $y + 30$ (iv) $y + 30 - 3$ (v) $y - 2$
Q25	(1) $4x = 12$ ,(2) $x = 3$