

Class 6

Time – 1 hr

Q1. Write each of the following phrases using numbers, literals and the basic operations of addition, subtraction and multiplication:

$$1 \times 10 = 10$$

- The sum of x and 3
- The sum of x and 5 added by y .
- x added to the sum of y and 4
- Subtract 4 from x
- Decrease x by 7
- x less than the sum of y and 7
- The product of 7 and x
- 3 times x added to y
- 4 times the sum of x and y
- Multiply x by 7

Q2. Find the value of variables from each of the given algebraic expressions, if $a=2$, $b=-2$, $c=3$.

$$2 \times 5 = 10$$

- $9a^2b^3 - 2ab + 25$
- $2abc + ab - 2c + 20$
- $8abc + 5abc^2$
- $6ab + 2bc - 72$
- $2ab + 3a + bc$

Q3. Classify the following as alphanumerical and numerical.

$$\frac{1}{2} \times 10 = 5$$

- $y + 3$
- $(7 \times 20) - 8z$
- $5(21 - 7) + 7 \times 2$
- 5
- $3x$
- $5 - 5n$
- $(7 \times 20) - (5 \times 10) - 45 + p$
- $a^2 + 5a + 4$

i. $98 + 2ab + 980$

j. $20 + 7(7 + 9)$

Q4. Answer the following:

$3 \times 5 = 15$

- a. Take Neha's present age to be y years.
1. What will be her age 5 years from now?
 2. What was her age 3 years back?
 3. Neha's grandfather is 6 times her age. What is the age of her grandfather?
 4. Grandmother is 2 years younger than grandfather. What is grandmother's age?
 5. Neha's father's age is 5 years more than 3 times Neha's age. What is her father's age?
- b. The length of a rectangular hall is 4 meters less than 3 times the breadth of the hall. What is the length, if the breadth is b meters?
- c. A rectangular room has height h cm. Its length is 5 times the height and breadth is 20 cm less than the length. Express the length and the breadth of the room in terms of the height.
- d. Answer the following:
1. One ball pen costs $\$ x$ and one fountain pen costs $\$ y$. Find the cost of y^2 ball pens and x^2 fountain pen.
 2. The initial count of bacteria is x and it becomes y times every day. Find the total count of bacteria after a week.
- e. A car travels at v km per hour. It is going from Delhi to Jaipur. After the car has travelled 5 hours, Jaipur is still 20 km away. What is the distance from Delhi to Jaipur? Express it using v .