

**INTERNATIONAL INDIAN SCHOOL BURAI DAH**

**Worksheet for the Academic Year 2023-24**

CLASS : 6 SUBJECT : MATHEMATICS

LESSON – 11: Algebra

1. Give expressions for the following cases.
- (a) 71 added to  $m$
  - (b) 99 subtracted from  $m$
  - (c)  $n$  multiplied by 8
  - (d)  $p$  divided by 10
  - (e) 11 subtracted from  $-x$
  - (f)  $-y$  multiplied by 1
  - (g)  $-x$  divided by 11
  - (h)  $z$  multiplied by  $-5$
  - (i) 3 subtracted from a number  $y$ .
  - (j) 5 is added to three times a number  $x$ .
  - (k) Amulya is  $x$  years of age now. Five years ago, her age was

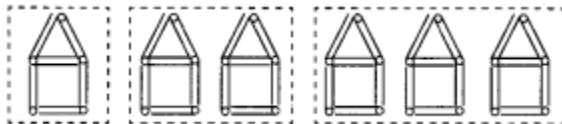
**Solutions:**

- (a)  $m+71$
- (b)  $m-99$
- (c)  $8n$
- (d)  $p/10$
- (e)  $-x-11$
- (f)  $-y$
- (g)  $-x/11$
- (h)  $-5z$
- (i)  $y-3$
- (j)  $5+3x$
- (k)  $x-5$

2. If there are a total of 50 mangoes in a box, how will you write the total number of mangoes in terms of the number of boxes? (Use  $b$  for the number of boxes.)

**[ans:  $50b$ ]**

3. Here is a pattern of houses with matchsticks:



Write the general rule for this pattern.

Solution:

One house is made of 6 matchsticks i.e.  $6 \times 1$

Two houses are made of 12 matchsticks i.e.  $6 \times 2$

Three houses are made of 18 matchsticks i.e.  $6 \times 3$

$\therefore$  Rule is  $6n$  where  $n$  represents the number of houses.

4. State which of the following are equations with a variable?
- (a)  $12 = x - 5$
  - (b)  $2x > 7$

(c)  $5 + 7 = 3 + 9$

(d)  $7 = (11 \times 5) - (12 \times 4)$

Solution:

(a)  $12 = x - 5$  is an equation with a variable  $x$ .

(b)  $2x > 7$  is not an equation because it does not have '=' sign.

(c)  $5 + 7 = 3 + 9$  is not an equation because it has no variable.

(d)  $7 = (11 \times 5) - (12 \times 4)$  is not an equation because it has no variable.

5. Get the algebraic expressions in the following cases using variables, constants and arithmetic operations.

(i) Subtraction of  $z$  from  $y$ .

(ii) One-half of the sum of numbers  $a$  and  $b$ .

(iii) One-Eighth of the product of numbers  $x$  and  $y$ .

(iv) Number 5 added to three times the product of number  $m$  and  $n$ .

(v) Product of numbers  $y$  and  $z$  subtracted from 10.

(vi) Sum of numbers  $x$  and  $y$  subtracted from their product.

Solution:

(i)  $y - z$

(ii)  $\frac{1}{2}(a+b)$

(iii)  $\frac{xy}{8}$

(iv)  $3mn + 5$

(v)  $10 - yz$

(vi)  $xy - (x+y)$

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