

Ex 11.1

3. Cadets are marching in a parade. There are 5 cadets in a row. What is the rule which gives the number of cadets, given the number of rows? (Use n for the number of rows.)

No. of Cadets in a row $\rightarrow 5$

No. of rows $\rightarrow n$

A: Rule $\rightarrow 5 \times n$

Ans $\rightarrow 5n$

6. A bird flies 1 km in one minute. Can you express the distance covered by the bird in terms of its flying time in minutes? (Use t for flying time in minutes)

Flying time

1 km \rightarrow 1 min

t km \rightarrow ? min

$\rightarrow t \times 1$

$= t$ km

A : t km

7. Radha is drawing a dot Rangoli (a beautiful pattern of lines joining dots) with chalk powder. She has 9 dots in a row. How many dots will her Rangoli have for 9 rows? How many dots are there if there are 8 rows? If there are 10 rows?

* No. of dots
in a row = 9

* No. of rows = 9

$= 9 \times 9$

No. of dots for 9 rows $= 9 \times 9$

* No. of dots
8 rows $= 9 \times 8$
 $= 72$

10 rows $= 9 \times 10$
 $= 90$

A : No. of dots

9 rows $= 9 \times 9$

8 rows $= 72$

10 rows $= 90$

8: Leela is Radha's younger sister. Leela (3) is 4 years younger than Radha. Can you write Leela's age in terms of Radha's age? Take Radha's age to be x years

Radha's age $\rightarrow x$

Leela's age $\rightarrow x - 4$

$\Delta \rightarrow (x - 4)$ years.

10. Oranges are to be transferred from larger boxes into smaller boxes. When a large box is emptied, the oranges from it fill two smaller boxes and still 10 oranges remain outside. If the number of oranges in a small box are taken to be x , what is the number of oranges in the larger box?

No. of oranges

small box $\rightarrow x$ [two boxes]

remain $\rightarrow 10$

Larger box $\rightarrow ?$

$\rightarrow x + x + 10$

$\rightarrow 2x + 10$

$\Delta \rightarrow 2x + 10$

Ex: 11.2

1) The side of an equilateral triangle is shown by l . Express the perimeter of the equilateral triangle using l .

Soln:

* Equilateral triangle = 3 sides

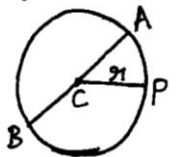
* The side of an equilateral triangle $l = l$



Ans: The perimeter of the equilateral triangle = $3 \times l$
 $= 3l$

Ans: $3l$

4) The diameter of a circle is a line which joins two points on the circle and also passes through the centre of the circle. (In the adjoining figure AB is a diameter of the circle; C is its centre.) Express the diameter of the circle (d) in terms of its radius (r).



Soln:

Diameter(d) = AB

= AC + CB

= $r + r$ [$\because CP = r$]

= $2r$

Ans: Diameter (d) = $2r$

Ex: 11.3

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3. Identify the operations (addition, subtraction, division, multiplication) in forming the following expressions and tell how the expressions have been formed.

(c) $2y+17$; $2y-17$.

Soln: * Operations.

$2y+17 \rightarrow$ Multiplication and addition

$2y-17 \rightarrow$ Multiplication and Subtraction.

$2y+17, 2y-17 \rightarrow$ Multiplication and addition,
multiplication and Subtraction.

* Statements

$2y+17 \rightarrow$ First y multiplied by 2, then 17 added to the product.

$2y-17 \rightarrow$ First y multiplied by 2, then 17 subtracted from the product.

(d) $7m$, $-7m+3$, $-7m-3$.

Soln: * Operations.

$7m \rightarrow$ Multiplication

$-7m+3 \rightarrow$ Multiplication and addition

$-7m-3 \rightarrow$ Multiplication and subtraction.

$7m, -7m+3, -7m-3 \rightarrow$ Multiplication, Multiplication and addition, Multiplication and subtraction.

* Statements.

$7m \rightarrow$ m multiplied by 7

$-7m+3 \rightarrow$ m multiplied by -7 , then 3 added to the product.

$-7m-3 \rightarrow$ m multiplied by -7 , then 3 subtracted from the product.

4) Give expressions for the following cases.

(a) 7 added to P

Ans: $P+7$

(c) P multiplied by 7

Ans: $7P$

(e) 7 subtracted from $-m$

Ans: $-m-7$

(g) $-P$ divided by 5

Ans: $\frac{-P}{5}$

5) Give expressions in the following cases.

(c) 5 times y to which 3 is added

Ans: $5y+3$

(d) 5 times y from which 3 is subtracted.

Ans: $5y-3$

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