

DAV SCHOOL, DHURWA  
SECTOR – III: RANCHI – 4  
SUMMER ASSIGNMENT – 2020-21  
Subject: MATHS  
CLASS – IX

Recommended Book: Secondary School Mathematics (R.S. Agarwal)  
Number Systems

Q.1. Without actual division, find which of the following rational number are terminating decimals.

- (1)  $13/80$       (2)  $7/24$       (3)  $5/12$       (4)  $31/375$

Q.2. Express each of the following decimals in the form  $p/q$  where  $p$  and  $q$  are integers and  $q$  is not equal to 0.

- (1)  $0.\bar{2}$       (2)  $2.\bar{93}$       (3)  $0.\bar{235}$       (4)  $0.00\bar{32}$       (5)  $0.40\bar{7}$

Q.3. Multiply

- (1)  $3\sqrt{5}$  by  $2\sqrt{5}$       (2)  $2\sqrt{6}$  by  $3\sqrt{3}$   
(3)  $\sqrt{10}$  by  $\sqrt{40}$       (4)  $3\sqrt{8}$  by  $3\sqrt{2}$

Q.4. Simplify:

- (1)  $(3 - \sqrt{11})(3 + \sqrt{11})$       (2)  $(\sqrt{5} - \sqrt{3})(\sqrt{5} - \sqrt{3})$   
(3)  $(3 - \sqrt{3})(3 - \sqrt{3})$       (4)  $(5 + \sqrt{7})(2 + \sqrt{5})$

Q.5. Represent each of the number:  $\sqrt{2}$ ,  $\sqrt{3}$  and  $\sqrt{5}$  on the real line.

### Factorisation of polynomial

Q.(6). Express each of the following equation in the form  $ax+by+c=0$  and indicate the value of a,b,c in each case.

(1)  $3x+5y=7.5$       (2)  $2x-y/5+6=0$       (3)  $3y-2x=6$       (4)  $4x=5y$

Q.(7). Check which of the following one of the solution of the equation  $5x-4y=20$ .

(1) (4,0)      (2) (0,5)      (3) (-2,5/2)      (4) (0,-5)

Q.(8). If  $x=3$  and  $y=4$  is a solution of equation  $5x-3y=k$ , find the value of k.

Q.(9). Draw the graph of the equation  $y=3x$  from your graph paper, find the value of y when :

(1)  $x=2$       (2)  $x=-2$

Q.(10). Draw the graph of the equation  $x+2y-3=0$  from your graph paper, find the value of y when :

(1)  $x=5$       (2)  $x=-5$

Q.(11). On the plane of a graph paper X and Y are coordinate axes and plot each of the following points.

(1) A(5,3)      (2) B(6,2)      (3) C(4,-6)      (4) D(-3,-2)      (5) E(-4,4)

Q. (12). Find the perimeter and area of a triangle whose sides are of length 52 cm, 56 cm and 60 cm respectively.

Q. (13). The sides of the triangle are in the ratio 5: 12: 13 and its perimeter is 150 m. Find the area of the triangle.

Q. (14) Find the area of an isosceles triangle each of whose equal sides measures 13 cm and whose base measures 20 cm.

Q. (15). Find the area of the triangle whose base measures 24 cm and the corresponding height measures 14.5 cm.

Q. (16). Which of the following expressions are polynomials? In case of a polynomial, write its degree.

i.  $x^5 - 2x^3 + x + \sqrt{3}$

ii.  $t^2 - \frac{2}{5t} + \sqrt{5}$

iii.  $-\frac{3}{5}$

iv.  $\frac{x^2}{2} - \frac{2}{x^2}$

v.  $\frac{3}{5}x^2 - \frac{7}{3x} + 9$