

## Holiday Assignment VI Chapter 1

Q Insert commas suitably and write names acc to indian system of numeration

470302

9847215

Q Insert commas suitably and write names acc to International system

18950049

8695432

Q Estimate  $5290 + 17896$

$5763 - 634$

$898 \times 785$

Q Write in Roman numerals 73 and 92

Q The town newspaper is published every day. one copy has 13 pages. Every day 11,980 copies are printed. How many total pages are printed everyday?

Q The number of sheets of paper available for making notebooks is 75,000. Each sheet makes 3 pages of a notebook. Each notebook contains 200 pages. How many notebooks can be made from the paper available?

Q To stitch a shirt 2 m 15 cm cloth is needed. out of 10 m cloth, how many shirts can be stitched and how much cloth will remain?

Q A book exhibition was held for four days in a school. The number of tickets sold at the counter on the first, second, third and final day was respct 4910, 2811, 5002, 5721. Find total number of tickets sold on all the four days.

Q Find difference between the greatest and the least 5 digit number that can be written using the digits 7, 5, 9, 1, 8 only once

Q The distance between the school and a student's home is 2 km 578 m. Everyday she walks both ways. Find the total distance covered by her in 5 days.

## Activity

- write your date of birth in Roman numerals
- write uses of Roman numeral in real life
- write population of Algeriah city according to indian system of numeration.

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Chapter = 2 VI  
Holiday homework whole number

Q.1 Find the sum by suitable rearrangement  
 $128 + 1767 + 272 + 343$

Q.2 Find the product by suitable rearrangement  
 $625 \times 3759 \times 8$

Q.3 Find using distributive property

(a)  $69 \times 78 + 22 \times 69$

(b)  $126 \times 55 - 126 \times 45$

Q.4 The school canteen charge Rs 25 for lunch and Rs 8 for milk for each day. How much money do you spend in 6 day on these things.

Q.5 Find the product using suitable properties.

(a)  $287 \times 107$

(b)  $423 \times 25$

(c)  $1009 \times 68$

Q.6 Write successor of 1099.

Q.7 Write predecessor of 2345670.

Q.8 Which is smallest and largest whole number.

Q.9 How many whole number are there between 42 and 57.

Q.10 State which whole number is on the left of other on number line also write appropriate sign ( $>$ ,  $<$ )

(a) 208, 280

(b) 98304, 76543

Exercise = 2.3

Q1 Which of the following will not represent zero.

- (a)  $1+0$       (b)  $0 \times 0$       (c)  $\frac{0}{2}$       (d)  $\frac{10-10}{2}$

Exercise = 2.2

Q7 Match the followings

(i)  $425 \times 136 = 425 \times (6 + 30 + 100)$  (a) Commutativity under multiplication

(ii)  $2 \times 49 \times 50 = 2 \times 50 \times 49$

(b) Commutativity under addition.

(iii)  $80 + 2005 + 20 = 80 + 20 + 2005$

(c) Distributivity of multiplication over addition.

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Ch:- 2

Linear Equation in one Variable

Q1 Solve

(a)  $x - 3 = 7$

(b)  $4 = 2 + 3$

(c)  $\frac{2x}{5} = 18$

(d)  $107 = \frac{3}{2.1}$

2) Example 8, 11, 7, 5

3) Exercise 2.2

Q 2, 16

Exercise:- 2.4

Q. 18

4) Example 18

5) Exercise 2.6

Q 7

6) Types of Quadrilaterals on chart paper.

Ch:- 2.1

Rational Numbers

1) Find (a)  $\frac{9}{7} + \left(-\frac{6}{5}\right) + \left(-\frac{8}{11}\right) + \frac{5}{22}$

(b)  $-\frac{4}{5} \times \frac{3}{11} \times \frac{15}{16} \times \frac{-14}{17}$

2) Write additive inverse of  $-\frac{7}{13}$  and  $\frac{3}{17}$

3) Verify  $-(-x) = x$

$x = \frac{19}{21}$

$x = \frac{-21}{17}$

4) Exercise:- 1.1

Q 10 and 11

5) Find six rational number between  $\frac{1}{4}$  and  $\frac{3}{5}$

6) Represent  $\frac{4}{5}$  and  $-\frac{3}{5}$  on number line.



7) Write five rational numbers which are smaller than 4.

8) Write five rational numbers greater than -5.

9) Name the property

$$(a) \frac{3}{7} \times 1 = 1 \times \frac{3}{7} \times \frac{-2}{7}$$

$$(b) \frac{-13}{17} + \left(\frac{-2}{7}\right) - \left(\frac{-2}{7}\right) + \left(\frac{-13}{17}\right)$$

$$(c) \frac{-5}{7} + 0 = \frac{-5}{7}$$

$$(d) \frac{-3}{11} + \frac{3}{11} = 0$$

Activity prepare ppt on maths of 15 min

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## Home Assignment Class IX

- Q Write the coefficients of  $x^2$  in  $2 - 3x^2 + 4x^3$
- Q Give one example of a trinomial of degree 35
- Q Write degree of given polynomials  
 $5x^3 - 3x + 2$
- Q Find the value of  $p(x) = 5x^2 - 3x + 4$  at  $x = 2$
- Q Verify whether 2 and 0 are zeroes of  $y^2 - y + 1$
- Q Find zeroes of (i)  $3x + 7 = 0$   
 (ii)  $5x = 0$   
 (iii)  $x + 8 = 0$
- Q Find the remainder when  $2x^4 - 4x^3 - 3x - 1$  is divided by  $x + 1$
- Q Check whether the polynomial  $q(t) = 4t^3 + 4t^2 - t - 1$  is a multiple of  $2t + 1$ .
- Q Factorise  $y^2 - 5y + 6$  by splitting middle term
- Q Factorise  $x^2 - 23x^2 + 42x - 120$
- Q Find the value of  $k$  if  $x + 1$  is a factor of  $p(x)$   
 $p(x) = kx^2 - 5x - 2$
- Q Factorise
- (i)  $49a^2 + 70ab + 25b^2$
  - (ii)  $\frac{25x^2}{4} - \frac{y^2}{49}$       (v)  $64m^3 - 27y^3$   
 (vi)  $27a^3 + 64b^3 + 108a^2b + 144abc$
  - (iii)  $8x^3 + y^3 + 27z^3 - 18xyz$
  - (iv)  $16a^2 + 4b^2 + 9c^2 - 16ab + 12bc - 24ac$
- Q Expand
- (i)  $(4a - 5b - 7c)^2$
  - (ii)  $(2a + 5b)^2$
  - (iii)  $(\frac{5}{2}p - \frac{3}{4}q)^2$

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Q Evaluate

(i)  $(104)^3$

(ii)  $(999)^3$

(iii)  $105 \times 106$

Q Without actually calculating the cubes, find the value

$$(24)^3 + (-11)^3 + (-13)^3$$

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## Number Systems

Q Find six rational numbers between  $\frac{3}{5}$  and  $\frac{4}{7}$

Q Locate  $\sqrt{5}$  on number line

Q Show Express  $1.4\overline{9}$  in the form  $\frac{p}{q}$

Q Find irrational number between  $\frac{1}{3}$  and  $\frac{2}{3}$

Q Visualise the representation of  $4.\overline{27}$  on the number line upto 5 decimal places

Q Add  $2\sqrt{3} + 5\sqrt{2}$  and  $\sqrt{3} - 4\sqrt{2}$

Q multiply  $6\sqrt{3}$  and  $2\sqrt{3}$

Q Simplify

(i)

$$(\sqrt{3} + \sqrt{3})^2$$

(ii)

$$(\sqrt{5} + \sqrt{7})(\sqrt{5} - \sqrt{7})$$

(iii)

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

Q Rationalise

(i)

$$\frac{1}{3 + \sqrt{5}}$$

(ii)

$$\frac{2 + \sqrt{3}}{5 + 2\sqrt{7}}$$

(iii)

$$\frac{1}{2 + \sqrt{3} + \sqrt{5}}$$

Q Find

(i)

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

(ii)

$$\left(\frac{2}{5}\right)^2$$

(iii)

$$\frac{49}{2}$$

(iv)

$$\frac{7}{7^{1/5}}$$

$$7^{1/4}$$

(v)

$$9^{1/3} \times 8^{1/3}$$

Q Represent  $\sqrt{3.5}$  geometrically.

Activity

- History of Coordinate Geometry
- prepare a power point presentation on any topic on mathematics (duration 15 min)

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## Holiday Homework of Maths X

Q.1 - Explain why  $3 \times 5 \times 7 + 7$  is a composite no.

Q.2 - After how many decimal places will the rational no.  $\frac{14587}{1250}$  terminate.

Q.3 - Without actually performing long division find if  $\frac{987}{10500}$  will have terminating or non-terminating decimal expansion.

Q.4 - Show that cube of any +ve integer is of the form  $4m$ ,  $4m+1$ ,  $4m+3$  for some integer  $n$ .

Q.5 - If  $n$  is an odd integer then show that  $n^2 - 1$  is divisible by 8.

Q.6 - Use Euclid division lemma to find the HCF of 441, 567 & 693.

Q.7 - Show that  $12^n$  can not end with the digit 0 or 5 for any natural no.  $n$ .

Q.8 - HCF and LCM of two no. is 9 and 459 respectively if one of no. is 27 find the other.

Q.9 - find the LCM & HCF of 336 and 54 by prime factorisation method.

Q.10 - prove that  $\sqrt{3}$  is an irrational number.

Q.11 - prove that  $\sqrt{5}$  is an irrational number.

Q.12 - If the HCF of 65 & 117 is expressible in the form  $65m + 117$  find the value of  $m$ .

Q.13 - Show that the square of any +ve integer is either of the form  $4q$  or  $4q+1$  for some integer  $q$ .

Q.14 - Write the prime factorisation 27300.

Q.15 - find the HCF of 867 & 255 using Euclid's division lemma.

Q.16 - find the zeroes of the following polynomial and verify the relationship b/w zeroes and the coefficient of the polynomial.



i).  $4x^2 - 3x - 1$

ii).  $t^3 - 2t^2 - 15t$

iii).  $4x^2 - 5\sqrt{2}x - 3$

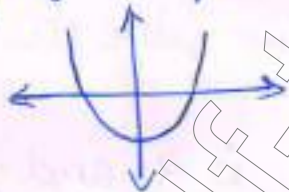
Q.17) - find the quadratic polynomial whose sum and the product of zeroes are  $-\frac{8}{3}$  and  $\frac{4}{3}$ .

Q.18) - find the quadratic polynomial whose zeroes are  $-2\sqrt{3}$ ,  $-9$ .

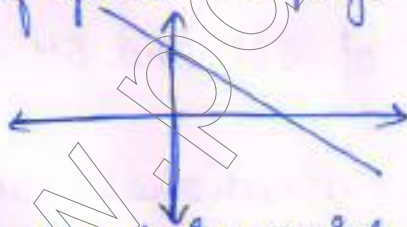
Q.19) - find the all zeroes of the polynomial  $8x^4 + 8x^3 - 18x^2 - 20x - 5$  if it is given that  $\sqrt{\frac{5}{2}}$  and  $-\sqrt{\frac{5}{2}}$

Q.20) - On dividing the polynomial  $p(x) = x^4 - 5x + 6$  by  $g(x) = 2 - x^2$

Q.21) - find the no. of zeroes of the polynomial  $p(x) =$



Q.22) - find the no of zeroes  $x = p(y)$



Q.23) - On dividing the polynomial  $p(x) = 4x^3 - 8x^2 + 8x + 1$  by  $g(x)$  the quotient and the remainder were  $2x - 1$  and  $x + 3$  respectively find  $g(x)$ .

Q.24) - Check whether  $x^2 - 2x + 2$  is factor of  $x^4 + 3x^3 + 7x^2 + x + 75$ .

Q.25) - If the zeroes of the polynomials  $3x^2 - px + 2$  and  $4x^2 - qx - 1$  is 2. find the values of  $2p - 3q$ .

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