DELHI PUBLIC SCHOOL, DURGAPUR

QUESTION BANK & REVISION SHEET (2018-19)

PERIODIC ASSESSMENT II

CLASS-VI (MATHEMATICS)

NUMBER SYSTEM

1. Fill in the blanks:

a) 1 lakh = _____ tens b) 1 crore = _____hundreds c) 10 crore = _____ lakh

2. What is the difference between the first natural number and the first whole number?

3. What is the difference between the fifteenth natural number and the fifteenth whole number?

4. What is the face value and the place value of 5 in each of the following numbers ?

a) 15 b) 51 c) 15, 11,121 d) 1, 67,532

5. Write the following numbers in expanded form.

a) 2,657 b) 32,164 c) 12, 76,089 d) 4, 32, 17,100

6. Write the predecessor and successor of each of the following numbers.

a)8,999 b) 99,999 c) 7, 28,999 d) 1,000

7. By using commas arrange the following numbers in ascending order.

a)824631;429685;911004;325676;534792

b) 6556656;6655556;5665565;5566665; 5665656

8. Write the greatest and smallest 6-digitnumbers that can be made using the following digits, if the repetitionof the digits allowed.

a) 2,9,3,7,1,4 b) 3,2,4,5,1 c)6,0,5,2,1 d) 1,7,9,4,5 e) 7,8,5,2,3,6

9. Write the following numbers in expanded form.

a) 2,364 b) 3.94.107 c) 77,077 d) 78, 12,354

10 How many 8-digit number are there in all?

11. Round the following numbers to the nearest thousand:

a) 16719 b) 26794 c)34389 d)18965

FACTORS AND MULTIPLES

1.Write all the prime numbers between 50 and 100.

2.Which of the following pairs are co-prime numbers?

a) 13 and 39 b) 9 and 10 c) 13 and 40 d) 11 and 100

3.Obtain the prime factorization of the following numbers:

a) 55 b) 27 c)36 d)330 e)2431 f) 1575

4.Find the HCF of the following using the prime factorization method:

a) 28 and 24 b) 105 and 120 c) 525 and 875 d)120,960 and 600 e) 45 and 54

5.Find the HCF of the following using division method:

a) 108 and 96 b) 160 and 176 c)5400 and 7560 d)3780,5040 and4725

6.Find the greatest number that divides 1470 and 1890 exactly without leaving any remainder.

7.What is the greatest number that divides 770 and 326 ,leaving 2 as a remainder in each case.

8.What will be the maximum length of a piece of ribbon if two long pieces of ribbon,800 cm and 640 cm

Long are cut into equal pieces .How many such small pieces of ribbon will be there?

9.Find the LCM of the following using the prime factorization method.

a) 21 and 14 b) 36 and 30 c)42,84 and 70 d) 45 ,60 and 120 e) 16,20 and 40

10.Find the LCM using division method:

a) 25,75and 80 b) 36,24 and 90 c)50 ,25 and 70 d)80,100,40 and 120

11.Find the smallest number that is exactly divisible by 132,165 and 143.

12.Find the greatest 6-digit number that is exactly divisible by 4 and 6.

13.The LCM of two coprime numbers is 5005 .If one of the number is 65 ,find the other number.

WHOLE NUMBER

1.State the properties of whole number of multiplication of whole number.

2.Find the answer to the following without actual multiplication, using the distributive property of Multiplication.

a) $(43\times 2) + (43\times 8)$ b) $(794\times 9)+(794\times 991)$ c) 60×101

d) 1009 ×3 e) 99×5 f) 990×4

g) 54×92 +54×7+54 h) 123×70+123×20+123×10

3.Find the product by suitable rearrangement :
a) 2 × 343×50 b) 4×903×25 c) 8 ×125 ×40 ×25 d) 50× 250 ×60× 8

4.Divide 53068 by 257 and check the result by the division algorithm.

5.Find the number which when divided by 53 gives 8 as quotient and 5 as remainder.

6.On dividing 59761 by a certain number ,the quotient is 189 and the remainder is 37 .Find the divisor .

7.Find the least 6-digit number exactly divisible 83.

8.Divide the largest 5 digit number by 653 .Check your answer by the division algorithm.

9.Find the largest 6-digit number divisible by 16.

10.What least number should be added to 10056 to get a number exactly divisible by 23 ?

INTEGERS

1. Find the successor of -8.
2. Find the predecessor of -9.
3. Find the value of the following using the number line:
   a) 7 –(-2) b) (-5) + (-3) c) (-2) –(-5)
4. Find the value of :
   a) 6 -9 +2 b) (-5) +(-3) –(-1) c) 37 +(-21) -26 +15 –(-2) +(-9).
5. Find three consecutive even integers preceding -96.
6. Find four consecutive odd integers succeeding -127.

7. Subtract the sum of -1342 and 451 from -54.
8. Subtract the sum of -125 and 450 from the sum of 431 and -450.
9. The sum of two integers is -18.If one of the numbers is 160, find the other.
10. Arrange the following integers in the ascending order:
a) -39, 35,-102, 0,-51,-5,-6, 7 b) -238,-315, 231,-328,-243, 73,-26,-27,105.

11. Find the sum of: a) -1242 and 652 b) -21,-34, 67 and -35
    c) -64 and 100 d) -378 and -888
12. Subtract: a) -9015 from 5421 b) 432 from 0
    c) 3517 from -342 d) -156 from 156
13 .Simplify: a) (-7) ×8 + (-7) ×2 b) (-45) × 72 + (-45) ×28
14. Find the value by using property:

(-345) ×55 + 44 × (-345) + (-345)

15.The product of two integers is -358.If one of the integer is 13,find the other.

Fraction

1. Reduce the following fraction to their lowest terms:

a) $\frac{360}{600}$ b) $\frac{135}{81}$ c) $\frac{26}{117}$

2. Arrange the following fraction in descending order:

a) $\frac{5}{17}, \frac{4}{9}, \frac{7}{12}$ b) $\frac{13}{18}, \frac{8}{15}, \frac{17}{24}, \frac{7}{12}$

3.Subtract the sum of $\frac{2}{3}$ *and* $\frac{1}{2}$ from the sum of $\frac{5}{6}, \frac{7}{12}, \frac{4}{15}$.

4. What fraction is 270 gm is 3 kilogram?

5. What fraction of an hour is 35 min?

6. Reduce the following fraction to their simplest form:

$\frac{48}{72}, \frac{276}{115}, \frac{72}{336}$

7. Represent each of the following fractions on the number line:

a) $\frac{4}{7}$ b) $\frac{3}{8}$ c) $\frac{17}{5}$

8. Convert $\frac{6}{8}, \frac{5}{12}, \frac{13}{24}$ *and* $\frac{11}{30}$ into like fraction.

9. Find the sum: $3\frac{4}{5}+7\frac{3}{10}+6\frac{1}{6}+5$

10 Simplify : $2\frac{3}{14}-3\frac{5}{6}-\frac{2}{5}+2\frac{1}{2}$

11.Two friends Alam and Ravi decide to buy a car .Alam pays $\frac{5}{11}$ and Ravi pays the rest .

(i) What fraction of the cost does Ravi pay?

(ii) If the car cost Rs 97889, how much does Alam and Ravi has each to pay?

12. Find the equivalent fraction of $\frac{5}{7}$ having denominator 77.

13.Of $\frac{5}{4}$ *and* $\frac{3}{8}$,which is greater and by how much ?

14. What should be added to 2/3 to get 3/2?

15.What should be added to the difference of $1\frac{1}{2}$ and $\frac{2}{6}$ to get $1\frac{2}{3}$?

SIMPLIFICATIONS

1. $19-[4+\{16-(12-2)\}]$
2. $36-[18-\{14-(15-4\div 2\times 2)\}]$
3. $5\frac{1}{2}$ of $(\frac{2}{3}-\frac{3}{5})+\frac{1}{2}\div\frac{5}{11}$

4. $14 - [12 - \{9 - (7 - 6)\}]$
5. $\frac{7}{10} - \{3\frac{3}{10} \div (2\frac{4}{5} - \frac{7}{10})\}$
6. $100 \div 4 \text{ of } 5 = 100 \div 4 \times 5 = 100 \div 20 = 5$
7. $53.5 - 34.68 + 64.75 - 28.9$
8. $25 - [10 - \{15 \div (8 - 5)\}]$

9.. $\frac{12}{7} \text{ of } 21 + \frac{15}{4} \div \frac{3}{7} - \frac{4}{3}$

DECIMALS

1.Write the decimal for each of the following

a) Ten and seven tenths

b) Twenty –three and one hundredths

c) One hundred one and eleventh thousandth

2.Write the place value of 9 in the following decimal numbers.

a) 93.8 b) 129.01 c) 172.249 d) 600.196 e) 974

3.Write the following decimal in expanded form as fractions.

a) 3.7 b) 4.32 c) 17.07 d) 824.299 e) 37.01

4. Write the following decimals in expanded form as a sum of decimals.

a)5.5 b) 22.368 c) 124.111 d) 14.217 e) 777.77

5.Arrange the following decimals in ascending order.

a)21.12 ;2.112; 211.2 ;2112 ;0.211 b)23.68;42.14;13.01;29.46;33.17

c)1.617 ;171.2;14.34;12.79;199.9 d)0.212 ;0.221;0.122;0.121;0.112

6. Convert the following into decimal.

a) 9/10 b) 1279/10 c) 7/1000 e) 69/100 e) 7749/10

7.Convert the given fractions into decimals by long division method.

a) ½ b) 7/8 c)5/8 d) 19/5 e) 533/40

8.Add the following.

a) 2,165 +32.78 b) 601.23+18.901 c) 71.29+1.369+ 88.8 d) 4.11+1.6+7

9. Subtract the following.

a) 3- 1.013 b) 21.7-4.69 c) 6 -0.666 d) 43.1 -34.111

e) 11.111- 1.111

10.Simplify:

a) 3.4 +5 -6.4 b)63.2-41.71 -24.541 +33.138 c) 2.67-1.787 +1.878

d) 121.121 +112.112 – 211.211 e) 63.2 -41.71 -24.541 + 33.138

11.By how much is the sum of 14.28 and 11.219 greater than their difference?

12.What should be added to the difference of 3.14 and 1.674 to get 9 ?

ALGEBRAIC EXPRESSION

1.Express the following in algebraic form.

a) 3 is added to x.

b) x is increased by 21.

c) 9 is taken away from *a.*

d) p times q is added to 7 times r.

e) The product of 3 and x is subtractedfrom the sumof y and 5.

f) Half of x is taken away from one –third of y.

2.Write the following in product form.

a) b^6 b) $5c^3$ c) pq^3 d) $21x^4y^2z^3$ e) $5xyz^3$

3. Identify the variable and constant terms in the following expression.

a) x -3 b) 4x +12 c) $13+x^2$ -x d) a^2 +6a +9 e) $x^4-3x^3+2x^2+x-4$

4) Write the coefficient of the following .

a) x in 20x b) x in –x c) a in abc d) 4x in 4xyz

e) y in 2/3 xy f) y in y^3 g) x^2y in $4x^2y^2z^2$ h) x in x

5) Find the values of the following algebraic expression ,by substituting the variable with the given values.

a) 9x when x = 3
b) x+4 when x= 4
c) 3a – 2b when a=7 ,b= 4
d) 6x +3y -5 when x= 3,y= -2
e) 2pq +3qr-2pr when p=3 ,q = 2,r = 4
f) a -2ab +b when a= 5 ,b =3
g) $2p^2$+5 -3q when p = 3 ,q =7

6) Find the value of $a^3+b^3+c^3$ -3abc ,given that a =2,b=3 and c= -1

7) Find the value of y^2+5y-5 ,given that y = 2,3,5,7.

8) Add the following.

a) 2xy ,3xy b) 15pq ,2pq ,- 7qp c) xyz ,3xyz and 5xyz d) $7x^2y$, $-3x^2y$.

e)$-13x^3y^2z$, $-12x^3y^2$ f) 2x+y and x+3y g) 2x+3xy+6 and 4x +xy +2

h) $3x^2y+2xy^2-14$,$2x^2y-4xy^2+10$ i) $12pq+3pq^2-2p^2q^2$ and $8pq+3-qp^2$

9) Subtract :

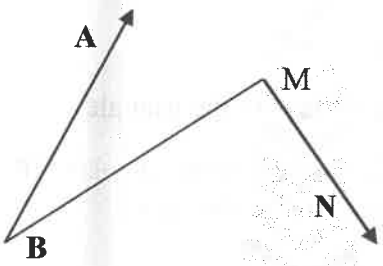
a) 3xy from 5xy b) -6abc from 6abc c) -6abc from -6abc d) a^2b^3 from $-3a^2b^3$

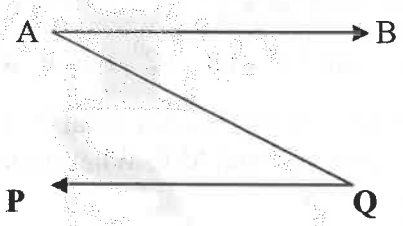
d) x +y from 5x +3y e) $2x^2+3xy$ from $9x^2+5xy$ f) $3pq+2q^2+3$ from $pq+4q^2+7$

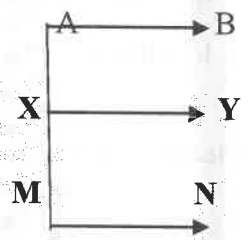
g) $-3xy-4x^2y$ from $-xy-x^2y$ h) $2p^2q+3q^2p+4$ from $3p^2q-2q^2p+3$.

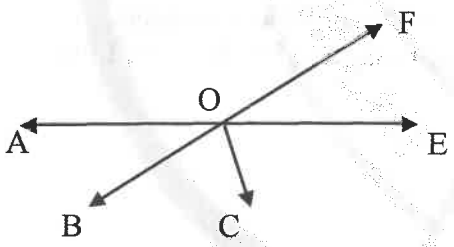
Line segment , Ray , Line and Angles and their Measurement,Triangles

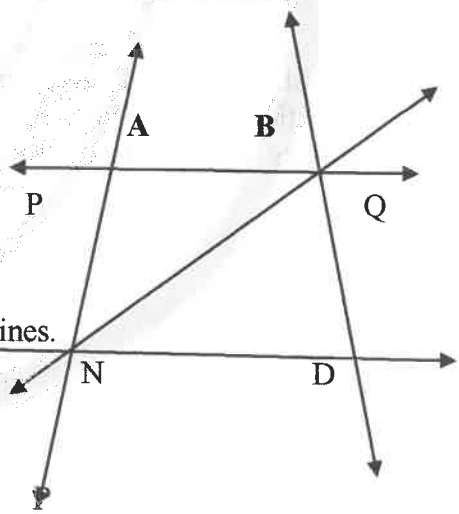
1.Identify and name the line segments and rays in each of the following figures:











2.Write two difference between intersecting lines and concurrent lines.

3.In the adjoining figure ,name:

a) three concurrent lines

b) three non collinear points

c) two pairs of intersecting lines

d) four rays

e five lines

f) four line segments

g) Three lines whose point of intersection is N.

4. Fill in the blanks:

a) A line segment has a _____ length.

b) A line has _____end point.

c) A ray has _____one point.

d) A ray has no _____length.

5. Given A B of length 7.3cm and CD of length 3.4cm, construct a line segment XY such that the length of XY is equal to the difference between the lengths of AB and CD, Verify by measurement

6. Construct with ruler and protractor angles of the following measures:
a) 30^0 b) 135^0 .Classify the angles.

7. Name the angle formed by the hands of a clock when it is at 3 o'clock.

8 Classify the following triangles based on sides whose measurements are as follows in cm

a) 11, 12,14 b) 8, 8, 5 c) 3, 3, 2 d) 5,8,3 e) 7, 7, 15 f) 9,9,9

9. In a right triangle one acute angle is 40^0 , find the third angle ?

10. In a triangle two angles are 54^0 and 102^0, find the other angle ? Classify the triangle.

11. Draw a line segment XY = 8 cm. Mark a point P , 4cm from X. Draw a perpendicular MP of length 5cm at point P. Join MX and MY. What figure do you get? Name the figure.

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SYLLABUS PA II :Number System, Factor and Multiples ,Whole Numbers, Integers, Fractions, Simplifications, Decimals, Algebraic Expressions, Line segment ,Ray and Line, angles and their measurement, Triangles.