

**INTERNATIONAL INDIAN SCHOOL, DAMMAM**

**MATHS WORKSHEET 2018-19**

**CLASS VII FRACTIONS AND DECIMALS**

1. Solve : (a).  $\frac{2}{5} + \frac{3}{4}$  (b)  $\frac{10}{11} - \frac{7}{15}$
2. Find : (a).  $\frac{2}{3}$  of  $\frac{3}{8}$  (b)  $1\frac{1}{4}$  of  $2\frac{3}{5}$
3. Multiply the following  
(a)  $4\frac{2}{3} \times \frac{4}{11}$  (b)  $1\frac{1}{2} \times 3\frac{2}{3}$
4. Simplify : (a)  $3\frac{1}{7} \div 4\frac{5}{7}$  (b)  $2\frac{1}{5} \div 4\frac{2}{5}$
5. Find :  
(a)  $7 \times 24.35$  (b)  $17.6 \times 0.05$  (c)  $1.17 \times 0.02$  (d)  $0.4 \div 0.004$  (e)  $35.4 \div 3$  (f)  $25.2 \div 0.6$
6. Arrange the following in ascending order : (a)  $\frac{3}{5}, \frac{2}{3}, \frac{7}{10}$  (b)  $\frac{2}{3}, \frac{5}{9}, \frac{7}{15}$
7. From a super bazar, Amisha purchased  $5\frac{3}{4}$  kg of sugar and  $2\frac{7}{8}$  kg of cooking oil. What is the total weight of goods purchased ?
8. Karan and Bhoomika went for a picnic. Their mother gave them a water bottle containing 3 litre of water. Karan consumed  $\frac{5}{9}$  of the water. Bhoomika consumed the remaining water. How much water did (i) Karan (ii) Bhoomika drink ?
9.  $8\frac{3}{4}$  m of ribbon is equally divided among 14 girls. How much will each get ?
10. The cost of 5.5 litres of petrol is Rs. 267.85. What is the cost price of petrol per litre ?
11. The product of two decimal numbers is 10.08. If one of them is 3.6. Find the other number.
12. A car covers a distance of 56.1 km in 3.4 litres of petrol. How much distance will it cover in one litre of petrol ?
13. Each side of a regular polygon is 7.2 cm in length. The perimeter of the polygon is 43.2 cm. How many sides does the polygon have?
14. Find the average of 4.2, 8.5, 3.9 and 4.6
15. Raj bought  $15\frac{1}{4}$  kg of apples and Renu bought  $15\frac{2}{3}$  kg of apples. Who bought less number of apples?
16. Nikhil exercised for  $\frac{3}{6}$  of an hour. While Rohit exercised for  $\frac{3}{4}$  of an hour. Who exercised for a long time ?
17. A rectangular sheet of paper is  $4\frac{1}{6}$  cm long and  $\frac{2}{3}$  cm wide. Find its perimeter.
18. A man purchased 20 litre of oil. He gave  $5\frac{3}{4}$  litre of oil to his son and  $6\frac{1}{5}$  litre to his daughter. Find the oil left with him.
19. Riya plants 6 saplings in a row in her garden. The distance between two adjacent saplings is  $\frac{5}{8}$  m. Find the distance between the first and the last sapling.
20. Neha's house is  $2\frac{9}{10}$  km from her school. She walked some distance and took a bus for  $1\frac{1}{4}$  km to reach the school. How far did she walk ?

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MATHS WORKSHEET 2018 -2019

CLASS - VII RATIONAL NUMBERS

1. Write four more rational numbers in each of the given pattern.

(i)  $\frac{-2}{6}, \frac{-4}{12}, \frac{-6}{18}, \dots, \dots, \dots, \dots$  (ii)  $\frac{-1}{2}, \frac{2}{-4}, \frac{4}{-8}, \dots, \dots, \dots$

2. Write four rational numbers equivalent to each of the following.

(i)  $\frac{4}{9}$  (ii)  $\frac{-3}{-5}$  (iii)  $\frac{-5}{2}$

3. Do  $\frac{-4}{16}$  and  $\frac{7}{-28}$  represent the same rational number?

4. Write each of the following rational numbers in the standard form.

(i)  $\frac{-9}{27}$  (ii)  $\frac{-21}{70}$  (iii)  $\frac{24}{42}$  (iv)  $\frac{-2}{-3}$

5. Express  $\frac{4}{9}$  as a rational number with numerator (i) -36 (ii) 44

6. Express  $\frac{14}{-6}$  as a rational number with denominator (i) 54 (ii) 3

7. Fill in the blanks

(i)  $\frac{3}{8} = \frac{-12}{-24} = \frac{27}{\quad}$

(ii)  $\frac{8}{15} = \frac{\quad}{-60} = \frac{48}{\quad} = \frac{-16}{\quad}$

8. Compare the following rational numbers.

(i)  $\frac{2}{6}$    $\frac{4}{9}$  (ii)  $\frac{-1}{3}$    $\frac{-2}{-8}$  (iii)  $\frac{-6}{9}$    $\frac{2}{-3}$  (iv)  $\frac{7}{5}$   0

9. Represent the following on Number Line.

(i)  $\frac{3}{4}$  (ii)  $\frac{5}{6}$  (iii)  $\frac{-2}{-5}$  (iv)  $\frac{-1}{4}$

10. Find five rational numbers between

(i) -3 and -4    (ii)  $\frac{-3}{4}$  and  $\frac{5}{2}$     (iii)  $\frac{-5}{6}$  and  $\frac{-7}{6}$

11. (a) Arrange the following rational numbers in ascending order.

(i)  $\frac{4}{27}$ ,  $\frac{5}{18}$ ,  $-\frac{2}{9}$ ,  $\frac{-1}{3}$     (ii)  $\frac{2}{-5}$ ,  $\frac{7}{10}$ ,  $\frac{6}{20}$ ,  $\frac{-12}{30}$

(b) Arrange the following rational numbers in descending order.

(i)  $\frac{-4}{6}$ ,  $\frac{1}{12}$ ,  $\frac{13}{36}$ ,  $\frac{1}{-24}$     (ii)  $4$ ,  $\frac{1}{-10}$ ,  $\frac{-6}{15}$ ,  $\frac{3}{20}$

12. Evaluate

(a)  $\frac{-3}{4} + \frac{(-5)}{8}$     (b)  $\frac{1}{3} + \frac{8}{9}$     (c)  $\frac{-3}{5} - \frac{(-15)}{7}$     (d)  $\frac{-8}{5} + 0$

(e)  $2\frac{1}{4} - 4$     (f)  $\frac{-6}{7} - \frac{(-30)}{42}$     (g)  $\frac{-1}{7} + \frac{14}{7} - (-2)$

(h)  $\frac{-3}{5} + \frac{6}{5} - \frac{1}{5}$     (i)  $\frac{17}{10} + \frac{-1}{4} + \frac{4}{6}$

13. (a) Find the additive inverse of  $-12$ ,  $\frac{3}{4}$ ,  $\frac{7}{-8}$ ,  $1$

(b) Find the reciprocal of  $\frac{-9}{4}$ ,  $\frac{7}{12}$ ,  $6$ ,  $-3$ ,  $\frac{-14}{-21}$

14. Multiply

(a)  $\frac{7}{9} \times \frac{2}{5}$     (b)  $\frac{-11}{4} \times \frac{8}{9}$     (c)  $\frac{6}{-4} \times \frac{-16}{6}$     (d)  $\frac{4}{7} \times (-5)$     (e)  $1\frac{5}{6} \times \frac{(-12)}{4}$

(f)  $3\frac{2}{3} \times \frac{(-7)}{(-4)}$

15. Find the value of

(a)  $9 \div \frac{9}{4}$     (b)  $\frac{-11}{3} \div \frac{3}{11}$     (c)  $\frac{-5}{16} \div \frac{-2}{6}$     (d)  $\frac{-1}{13} \div \frac{1}{-7}$     (e)  $\frac{2}{12} \div \frac{(-4)}{18}$     (f)  $\frac{(-4)}{5} \div 3$

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MATHS WORKSHEET 2018-19  
CLASS VII SIMPLE EQUATIONS

1. Write the following statements in the form of equations:

- a) The sum of 4 times  $x$  and 10 is 50
- b) If you subtract 5 from 4 times a number, you get 7
- c) One fourth of  $m$  is 3 more than 7
- d) one third of a number plus 5 is 20
- e) Taking away 8 from  $x$  gives 10
- f) You get 6 when you subtract 2 from one fourth of number  $n$
- g) Eight times a number  $p$  is 56
- h) Add 7 to three times  $n$  to get 1

2. Convert the following equations in statement form:

- (a)  $y - 3 = 9$     (b)  $6p = 30$     (c)  $3n + 7 = 1$     (d)  $(m/5) - 2 = 6$
- (e)  $p + 4 = 15$     (f)  $2m = 7$     (g)  $4p - 2 = 18$     (h)  $(3m/5) = 6$

3. Solve the equations by transposing method

- (a)  $5p + 4 = 19$     (b)  $3m - 14 = 4$     (c)  $3n = 7 = 25$     (d)  $2p - 1 = 23$
- (e)  $x - 1 = 0$     (f)  $3n - 2 = 46$     (g)  $12p - 5 = 25$     (h)  $3s + 12 = 0$

4. Find the solution of :

- (a)  $2y + 5/2 = 37/2$     (b)  $5x + 20 = 36$     (c)  $3(x + 4) = 18$     (d)  $4(2 - x) = 16$
- (e)  $-4 = 5(p - 2)$     (f)  $0 = 16 + 4(m - 6)$     (g)  $15 = 5 - 4x$     (h)  $-12 = 3x + 3$
- (i)  $3p/4 + 6 = 24$     (j)  $6x = 56$     (k)  $(7y/5) = 35$     (l)  $4m/5 + 6 = 22$

5. Construct 3 equations starting with  $x = -3$

6. Solve the following:

- a) Lakshmi's father is 5 years more than 4 times Lakshmi's age. Find Lakshmi's age if her father is 49 years old?
- b) Answer think of a number. If he takes away 7 from  $5/2$  of the number, the result is 23. What is the number?
- c) In an isosceles triangle, the base angles are equal. The vertex angles is  $40^\circ$  what are the base angles of the triangle?
- d) Raju says that he has 10 marbles more than five times the marbles Shaju has. Raju has 48 marbles. How many marbles does Shaju have?

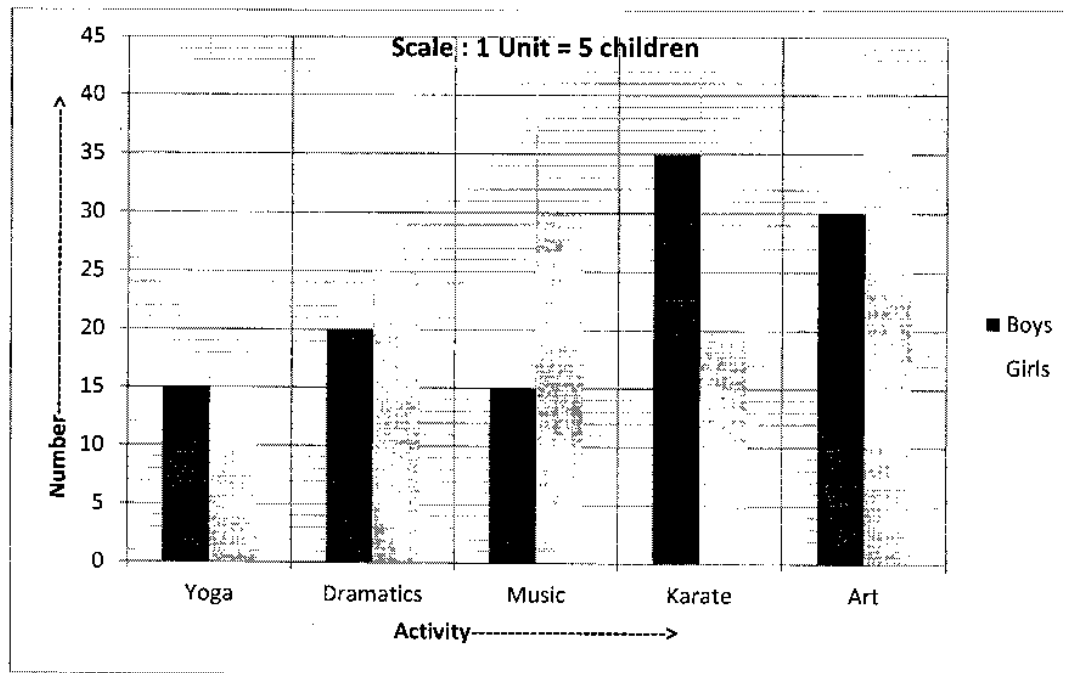
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MATHS WORKSHEET 2018-2019

CLASS:VII

DATA HANDLING

1. Find the mean of first 10 whole numbers.
2. The points obtained by a team in a game are as follows  
15,22,14,20,24,21, 8,17,25 .Find the :
  - (a) Highest and lowest points obtained by the team
  - (b) Range of the points obtained.
  - (c) Mean points obtained by the team.
3. Find the median of first 15 odd numbers.
4. Find the mode of given data showing the marks of students in the class test.  
12, 7, 9, 10, 19, 12, 18, 15, 9, 8, 12, 16, 15, 19, 12, 8, 12, 8.
5. The weight (in kg) of 5 men are 62, 65, 69, 66 and 61 . Find median.
6. There are seven cups placed upside down and under one cup is a marble.  
Neeraj has to pick up one cup
  - (a) What is the probability of finding the marble?
7. Look at the double bar graph showing the various activities taken up by the boys and girls in the particular group.



- (a) Which activity has been taken by equal number of boys and girls?  
 (b) Which activity has been taken by more boys than girls?  
 (c) In which activity are there 5 more girls than boys ?  
 (d) How many boys are there in all activities?  
 (e) How many girls are there in all activities?
8. Sale of mathematics books of title I and title II in the year 2002,2003, 2004,2005 are given below:

	2002	2003	2004	2005
Title I	350	400	450	620
Title II	500	525	600	650

Draw a double bar graph and answer the following question from the graph

- (a) In which year was the difference in the sale of the two title least?
9. The maximum and minimum temperature (in °c) of various cities given below. Draw double bar graph and answer the following .

City	Ahmedabad	Amritsar	Banguluru	Chennai	Delhi	Jaipur	Jammu	Mumbai
max	38	37	28	36	38	39	41	32
Min	29	26	21	27	28	29	26	27

- (a) Which city has the largest difference in the minimum and maximum temperature on the given data?  
 (b) Which is the hottest city and which is the coldest city?  
 (c) Name the two cities where maximum temperature of one was less than the minimum temperature of other?
10. The result of pass percentage of class 10<sup>th</sup> and 12<sup>th</sup> in CBSE examination for five years are given bellow:

Year	2001	2002	2003	2004	2005
10th	80	85	82	78	88
12th	92	89	90	95	94

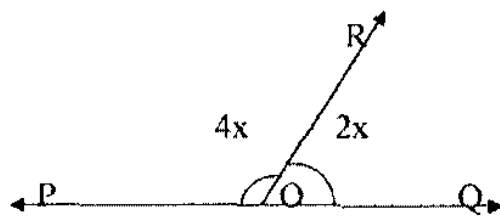
Draw a double bar graph

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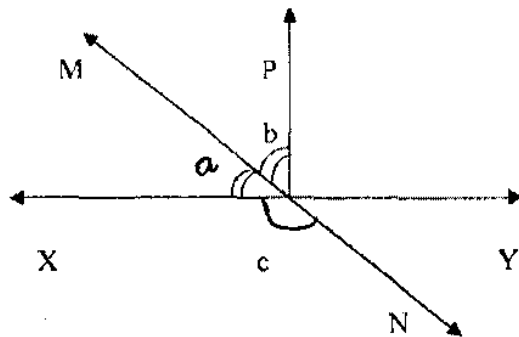
MATHS WORKSHEET 2018 -2019.

CLASS - VII LINES AND ANGLES

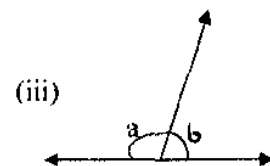
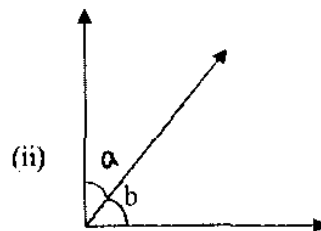
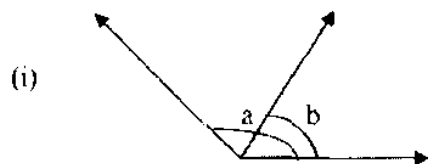
1. An angle is  $59^\circ$  , the measure of its complement angle is ----- .
2. If the sum of the measures of two angles is  $180^\circ$  , then they are ----- .
3. The supplement of an obtuse angle is always ----- angle .
4. Two angles forming a ----- pair are supplementary .
5. Corresponding angles are on the ----- side of the transversal.
6. The difference between two supplementary angles is  $50^\circ$  . Find the angles.
7. In the figure, POQ is a line,  $\angle POR = 4x$  and  $\angle QOR = 2x$  . Find the value of x.



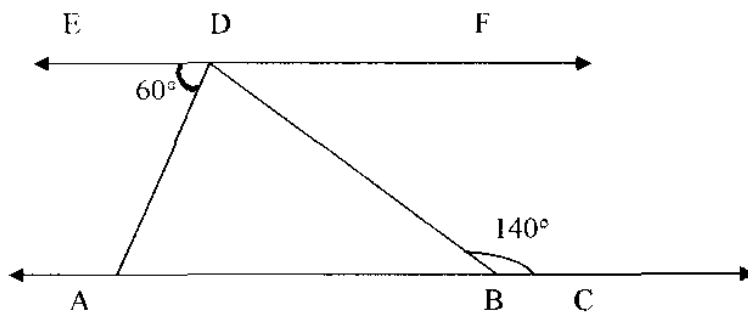
8. If lines XY and MN intersect as shown below and  $a=b$  . Find c.



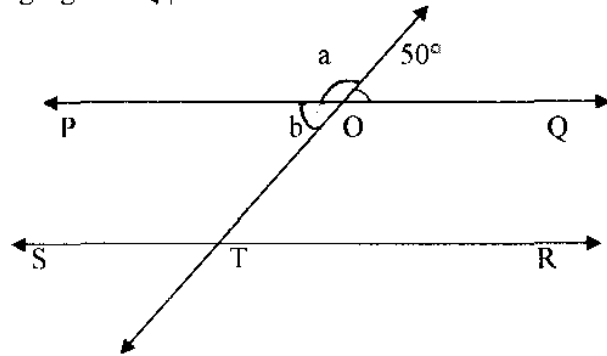
9. The difference in the measures of two supplementary angles is  $36^\circ$  . Find the measures of the angles.
10. Which of the following form adjacent angles? Give reason.



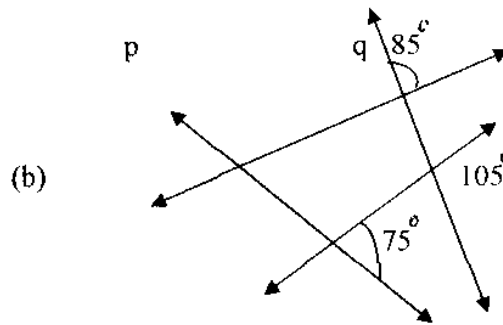
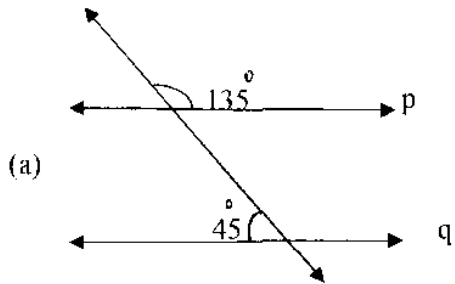
11. If AC and EF are parallel, find  $\angle ADB$ .



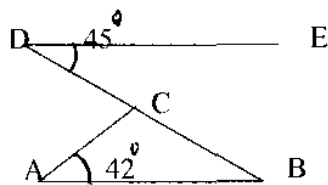
12. In the following figure  $PQ \parallel SR$  and  $OT$  is the transversal. Find the unknown angles.



13. In the given figures below, decide whether  $p$  is parallel to  $q$



14. If AB and DE are parallel, find the value of  $\angle ACB$ .





**-:INTERNATIONAL INDIAN SCHOOL DAMMAM:-**

**MATHS WORK SHEET 2018—2019**

**CLASS VII**

**SYMMETRY**

1. A figure has **line symmetry**, if there is a line about which the figure may be folded so that the two parts of the figure will coincide.
2. Regular polygon have equal sides and equal angles. They have multiple (ie. More than one) lines of symmetry.
3. Each regular polygon has as many lines of symmetry as it has sides.

Regular polygon	Regular hexagon	Regular pentagon	Square	Equilateral triangle
Number of lines of symmetry	6	5	4	3

4. Mirror reflection leads to symmetry, under which the left-right orientation have to be taken care of.
5. If, after a rotation, an object looks exactly the same, we say that it has a **rotational symmetry**.

**Answer the following:-**

1. State the number of lines of symmetry for the following figures:  
(a) An equilateral triangle (b) an isosceles triangle (c) A scalene triangle  
(d) a square (e) a rectangle (f) a rhombus  
(g) a parallelogram (h) a quadrilateral (i) a regular hexagon  
(j) a circle
2. What letters of the English alphabet have reflectional symmetry about .  
(a) a vertical mirror (b) a horizontal mirror  
(c) both horizontal and vertical mirrors
3. Give three examples of shapes with no line of symmetry.
4. What other name can you give to the line of symmetry of  
(a) An isosceles triangle? (b) a circle?
5. Name any two figures that have both line symmetry and rotational symmetry.

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**MATHS WORKSHEET**

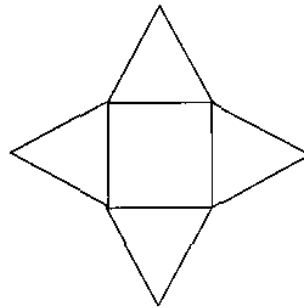
**CLASS – VII**

**CHAPTER – VISUSLISING SOLID SHAPES**

I. Match 3D Shapes with their nets:

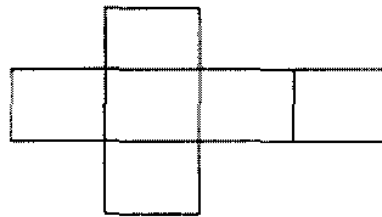
i. Cube

a.



ii. Cuboid

b.



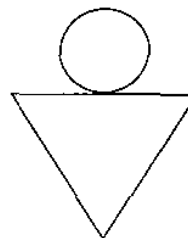
iii. Cone

c.

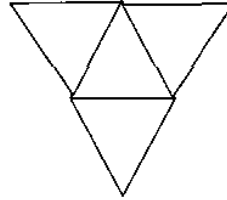


iv. Cylinder

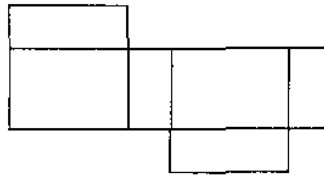
d.



v. Square Pyramid e.

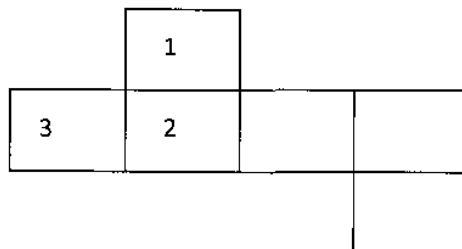


vi. Tetrahedron f.



II. Fill in the blanks:

1. A \_\_\_\_\_ is a Skeleton outline of a solid that can be folded to make it
2. The Two Sketches of a Solid are \_\_\_\_\_ and \_\_\_\_\_.
3. The Sketch of Solids in which the measurements are kept Proportional is \_\_\_\_\_.
4. Insert suitable numbers in the blanks for the given net to make dice.



III. Answer the following Questions:

1. The Two dice are placed side by side as 4 + 3 what would be the total of face opposite to it.
2. If the length of each dice is 2 cm, what are the dimensions of cuboid formed when two dice are placed side by side.
3. If 4 Cubes each with 2 cm edge are placed side by side to form a cuboid, then say what could be its l, b, h.

**INTERNATIONAL INDIAN SCHOOL – DAMMAM**  
**MATHEMATICS WORKSHEET 2018 – 2019**  
**CLASS VII CHAPTER 13 EXPONENTS AND POWERS**

1. Write  $16 \times 8 \times 32$  in the exponential form taking base as 2.
2. Write  $27 \times 27 \times 27$  in the exponential form taking base as 3.
3. Simplify :

a)  $(9^0 - 6^0) \times (5^0 + 8^0)$

b)  $(-2)^2 \times (-3)^3 \times 4^0 \times (-1)^2$

c)  $(5^0 \div 4^0)^3 + (7^0 - 6^0)^3$

d)  $(-4)^2 \times (-3)^3$

e)  $3^0 + 2^0 + 5^0 + 9^0$

4. Find the value of :

a)  $7^4$       b)  $(-6)^5$       c)  $11^3$

5. Express each of the following as a product of prime factors in exponential form:

a)  $324 \times 432$

b)  $864 \times 270$

c) 2025

d)  $\frac{125}{729}$

e)  $495 \times 198$

6. Which one is greater?

a)  $2^6$  or  $6^2$

b)  $5^4$  or  $4^5$

7. Using laws of exponents, simplify and write the answer in exponential form :

a)  $[(3^2)^4 \times 3^5] \div 3^7$

b)  $\frac{9 \times 3^2 \times 4^2}{2^2 \times 3^3}$

c)  $\frac{7^4 \times 7^9 \times 14}{7^0 \times 7^6}$

8. Simplify using laws of exponents and mention the laws used.

a)  $\frac{(25)^3 \times 9^4 \times 16}{5^4 \times 3 \times 6}$

b)  $\frac{7^5 \times 32 \times a^5 \times b^8}{b^8 \times 49 \times a^2 \times 14}$

c)  $\frac{2^7 \times 25 \times (15)^7}{5^9 \times 6^7}$

d)  $\frac{3^9 \times 5^7 \times p^4 \times q^3}{75 \times 81 \times (pq)^3}$

9. Express the following numbers in standard form:

a) 2795.387

b) 564.2

c) 146000

d) 4579210

10. Write the following numbers in expanded form:

a) 674532

b) 20045

c) 908002

d) 579000

11. Find the numbers from each of the following expanded forms:

a)  $8 \times 10^5 + 3 \times 10^2 + 5 \times 10^1 + 7 \times 10^0$

b)  $4 \times 10^4 + 6 \times 10^3 + 7 \times 10^2 + 8 \times 10^0$

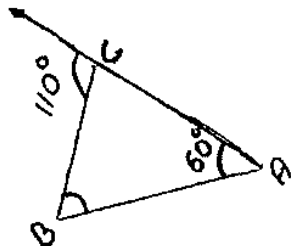
c)  $7 \times 10^5 + 3 \times 10^2 + 9 \times 10^1$

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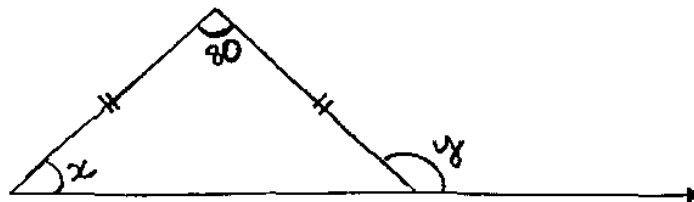
MATHS WORKSHEET 2018-2019

CLASS:VII TRIANGLES AND ITS PROPERTIES

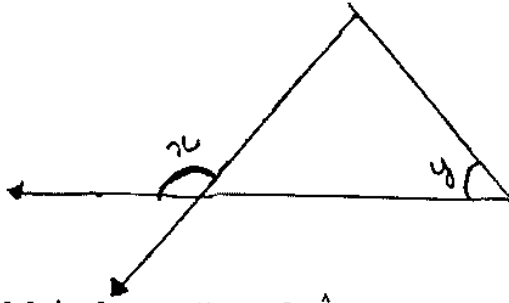
1. A median of a triangle is the line segment that joins a ..... to the ..... of the opposite side.
2. A triangle has ..... Altitudes.
3. An ..... Of a triangle is equal to the sum of its interior opposite angles .
4. Find the measure of  $\angle B = \dots\dots\dots$



5. The angles of a triangle are in the ratio 2 : 3 : 4 .Find all angles of the triangle.
6. In  $\triangle ABC$  ,  $\angle A = 30^\circ$  ,  $\angle B = 45^\circ$  , Find  $\angle C$ .
7. Can the following dimensions represent the sides of a triangle?
  - (a) 2 cm , 3 cm , 4 cm
  - (b) 5 cm , 6 cm , 12 cm
8. The length of the sides of a triangle are 12 cm and 15 cm . Between what measures should the length of the third side fall?
9.  $\triangle PQR$  is an isosceles triangle , Find the value of  $x$  and  $y$  .



10.  $\triangle ABC$  is an equilateral triangle, find the values of  $x$  and  $y$ .



11.  $AM$  is the median of  $\triangle ABC$ , Is  $AB + BC + CA > 2AM$ ?

12. The following are the length of the various triangle. Which of them are right triangle

(a) 6 cm, 8 cm, 10 cm

(b) 20 cm, 16 cm, 12 cm

(c) 30 cm, 40 cm, 50 cm

13. The sides of a rectangle are 12 cm and 5 cm. Find the length of the diagonal.

14. A cable wire of length 10 m is attached to the top of building from a pole fixed at a distance of 8 m from the bottom of the building. Find the height of the building.

15. The diagonal of a rhombus measure 18 cm and 24 cm. Find its perimeter.

16. Draw rough sketches for the following.

(a) In  $\triangle PQR$ ,  $PE$  is the median

(b) In  $\triangle ABC$ ,  $AB$  and  $AC$  are the altitudes of the triangle.

(c) In  $\triangle XYZ$ ,  $YL$  is an altitude in the exterior of the triangle.