

VISWABHARATI - GUDIVADA

WORK SHEET-3

Chapters: – Ch–8, 13, 14

Class: X

Subject: Mathematics

Name _____

Class/Sec: _____

Time: 1 ½ Hr

Max.Marks: 35 M

Roll No: _____

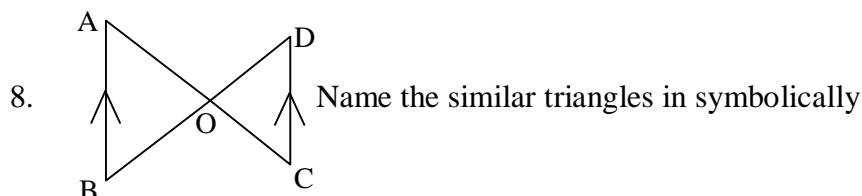
I. Answer the following Questions

$30 \times \frac{1}{2} = 15 M$

1. Which of the following is true
 - i) All similar triangles are congruent
 - ii) All congruent triangles are similar

A) Both true B) i only C) ii only
2. Give some examples of regular polygons
3. In $\triangle ABC$, $AB^2 = BC^2 + AC^2$ then it is right angled of what vertex
4. In $\triangle PQR$, $\angle Q = 90^\circ$, $PR = 20\text{cm}$, $QR = 12\text{cm}$ find PQ
5. In $\triangle DEF$, MN is a line segment such that M lies on DE, N lies on DF such that $MN \parallel EF$ then what ratios are equal.
6. Which of the following is not a similarity criterion of triangles

A) AA B) SSS C) SAS D) ASA
7. What are always similar



9. If two similar triangles areas ratio is 1 : 2. Then find the ratio of their corresponding sides
10. Match the following

i) BPT	[]	a) Baudhayana
ii) Pythagarous theorem	[]	b) Thales
iii) $a^2 = b^2 + c^2$	[]	c) Right angled \triangle
		d) Acute angled \triangle
11. Definition of probability given by the Mathematician
12. What is the sum of Probabilities of all elementary events in a Random experiment
13. A baby born is a boy or girl is belong the following event

a) Less likely b) equally likely c) more likely
14. Match the following

i) $P(\text{not}E) = 0.65$ then $P(E)$	[]	a) 1
ii) $P(\text{black Acc})$	[]	b) $\frac{1}{26}$
iii) $P(\text{sure events})$	[]	c) 0.35
15. Can $\frac{7}{2}$ be the probability of any event
16. Give some examples of Random experiment
17. Union of all events in a Random experiment is a sample space then events are what type of events
18. A bag contains 5 black balls, 8 blue balls, 9 red balls what is the probability that the ball taken out is not a red ball.
19. What is the probability of 53 Mondays in a non leap year
20. Find the probability of getting atleast one head when three coins tossed simultaneously
21. Which of the following is not a central tendency

A) Mean B) Range C) Median D) Mode
22. Match the following

i) Size of a class	[]	a) Max.value – Min.value
ii) Class mark of a class	[]	b) $\frac{U.b + L.b}{2}$
iii) Range	[]	c) $\frac{U.b + L.b}{2}$
23. Mean of first n natural numbers is 5.5 then find n

24. Which central tendency may or may not exist for ungrouped data
25. In mode formula what is meant by f_0
26. Median of $x, \frac{x}{2}, \frac{x}{3}, \frac{x}{4}, \frac{x}{5}$ ($x > 0$) is 8 then find x
27. E.I 0–10 10–20 20–30 30–40 40–50
 fv 5 7 11 3 1
 Median lies in which class interval
28. In less than Ogive curve what values we can consider on x and y axes
29. What is the better measure of central tendency
30. If some observations mode is 'y' if each observation is added by 2 find new mode.

II. Answer the following Questions

20 × 1 = 20 M

31. State converse of BPT
32. The perimeters of two similar triangles are 30cm and 20cm respectively. If one side of first triangle is 12cm. Determine the corresponding side of second triangle
33. The areas of two similar triangles are 81 cm^2 and 49 cm^2 respectively. If the altitude of the bigger triangle is 4.5 cm find the corresponding altitude for the smaller triangle.
34. ABC is an isosceles triangle right angled at C. Prove that $AB^2 = 2AC^2$
35. Two poles of heights 6m and 11m stand on a plane ground. If the distance between the feet of the pole is 12m. Find the distance between their tops.
36. In $\triangle ACB$, $\angle C = 90^\circ$, $CD \perp AB$ prove that $\frac{BC^2}{AC^2} = \frac{BD}{AD}$
37. Diagonals of a trapezium ABCD with $AB \parallel DC$, intersect each other at the point 'O'. If $AB = 2CD$. Find the ratio of areas of triangles AOB and COD
38. One card is drawn from a well-shuffled deck of 52 cards find the probability of getting black face card
39. A lot consists of 144 ball pens of which 20 are defective and others are good. What is the probability that the pen a person will not buy it.
40. A die is thrown once find the probability of getting multiple of 2
41. Sarada and Hamida are friends. What is the probability that both will have different birth days (Assuming that the year is a leap year)
42. There are 40 students in a class. Probability of selecting a girl name is $\frac{4}{5}$. Find the number of boys in the class.
43. Ramesh takes out all face cards from deck of cards. Find the probability of getting not an ace from remaining pack.
44. Two dice thrown simultaneously. Find the probability of getting sum of two numbers is 9
45. C.I 1–10 11–20 21–30 31–40 41–50
 fr 15 11 25 10 2
 Find class marks for the given data
46. Write median formula for grouped data and explain terms in it
47. C.I 0.00–0.02 0.02–0.04 0.04–0.06 0.06–0.08 0.08–0.10
 fr 2 5 13 4 1
 Find LCF and GCF for the given data
48. If 10 observations mean is 150 and 15 observations mean is 100 find mean of all observations
49. x_i 0 1 2 3 4 5
 f_i 5 12 15 22 10 2
 Find mean
50. If number of observations are even then what is median of observations