1. If log 2=0.3010, then find the value of log5.

(a) 0.6990

(c) 0.6020

(b) 0.7020

(d) 1/2

2. Find the value of "x", if $2^x = 8$.

(a) 8

(c) 3

(b) 7

(d) 5

3. The value of $\sqrt{121}/\sqrt{225}$

(a) 12/15

(c) 3/15

(b) 8/15

(d) 11/15

4. The value of $\sqrt{2}$ is

(a) 2.732

(c) 1.732

(b) 1.414

(d) 2.514

5. The perimeter of a rhombus is 20 cm. one of the diagonals is of length 8 cm. Find the length of other diagonal?

(a) 3

(c) 7

(b) 4

(d) 8

6. Find the area of the triangle when the three sides are of lengths 20 cm, 48 cm and 52 cm.

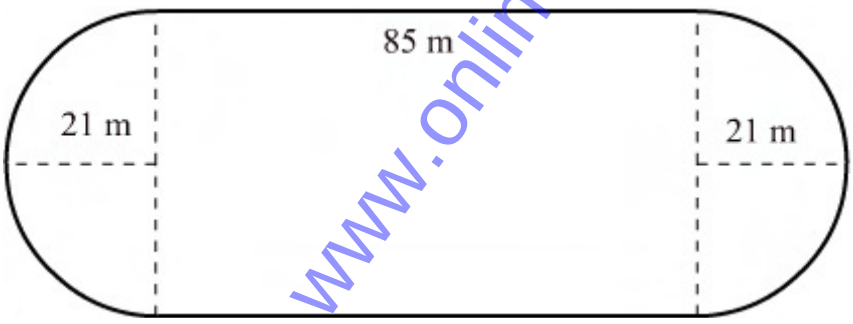
(a) 480 sq.cm

(c) 482 sq.cm

(b) 481 sq.cm

(d) 483 sq.cm

7. A play ground is to be constructed with two straight segments and two semicircular segments as shown in figure given below. The radius of each semicircular segment is 21m. The length of each of the straight segment is 85m. Find the area of the playground



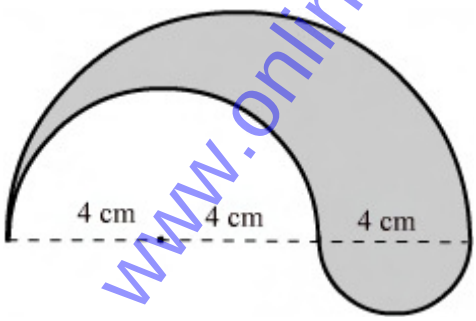
(a) 3956 sq.m

(c) 4956 sq.m

(b) 1956 sq.m

(d) 2956 sq.m

8. Find the area of the shaded region in the figure given below.



(a) 87.71 sq.cm

(c) 47.71 sq.cm

(b) 37.71 sq.cm

(d) 27.71 sq.cm

9. Antilogarithm of 1.8658 is

(a) 44.31 (c) 93.41

(b) 33.41 (d) 73.41

10. The set of all prime numbers id a/an

(a) Finite set (c) Infinite set

(b) Singleton set (d) none of these

11. Log m + Log n =

(a) Log (mn) (c) Log (m/n)

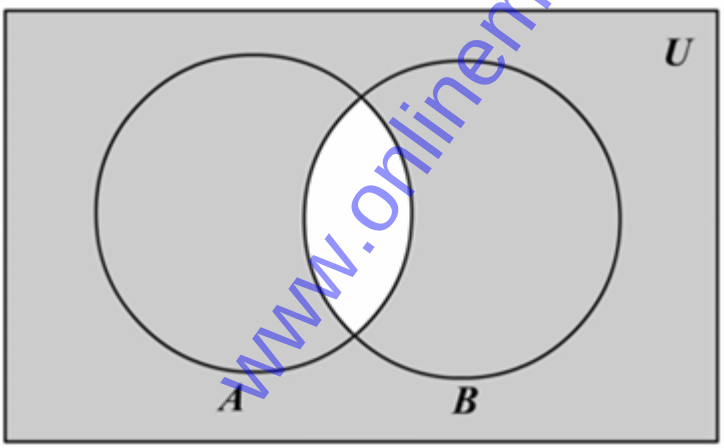
(b) Log (m-n) (d) Log m^n

12. The number of subsets for the set (1,2,3) is

(a) 6 (c) 3

(b) 5 (d) 8

13.



The above diagram represents

(a) AnB

(b) AuB

(c) $(AnB)^c$

(d) $(AuB)^c$

14. The number of girls in a village who attended tailoring classes was 45, the number of girls who attended classes on gardening was 70. If 30 of these attended both the classes, using Venn Diagram, find how many totally attended either of these classes

(a) 62

(b) 85

(c) 92

(d) 71

15. In a party attended by 250 persons, 210 took coffee, 50 took tea and some persons took both coffee and tea. If 20 persons did not drink coffee or tea. Find the number of persons who took both coffee and tea.

(a) 44

(c) 24

(b) 34

(d) 30

16.

$$(x^3 - px^2 + 9x - 1)\,(2x^3 - 3x^2 - x + 2)$$

In the above product, if the coefficient of x^2 is 12, then the value of P is

(a) -9

(c) -3

(b) -5

(d) -8

17.

$$a^3 + 3a^2b + 3ab^2 + b^3$$

The expression given above is equal to

(a) a^3-b^3

(b) a^3+b^3

(c) $(a-b)^3$

(d) $(a+b)^3$

18. If $x+y=6$ and $xy=8$, then the value of x^2+y^2 is

(a) 42

(b) 71

(c) 20

(d) 51

19. The square of an odd integer is

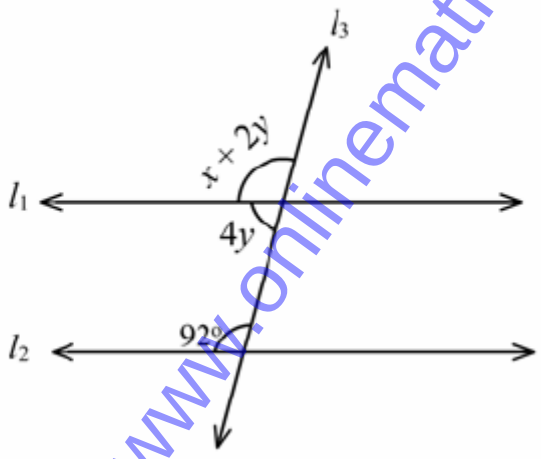
(a) Prime

(b) Odd

(c) Even

(d) None of these

20.



What is the value of "x" in the above figure?

(a) 48°

(c) 46°

(b) 47°

(d) 45°

21. Find the supplement of the angle 152 degrees.

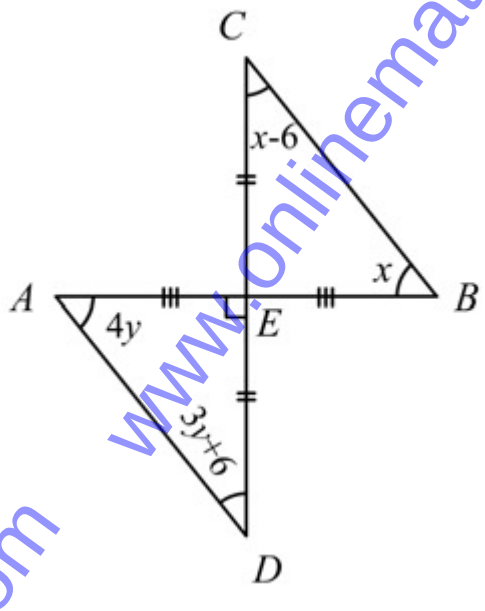
(a) 58°

(c) 38°

(b) 38°

(d) 28°

22.



What is the value of "x" in the above figure?

(a) 42°

(c) 48°

(b) 32°

(d) 52°

23. Find the vertical distance between the points (-3,-4) and (-9,11).

(a) 15

(b) 17

(c) 20

(d) 22

24.

$$\frac{y_2 - y_1}{x_2 - x_1} < 0$$

From the above, what do you understand about a line?

(a) Parallel to x-axis

(b) Parallel to y-axis

(c) Rising line

(d) Falling line

25. Find the slope of the line passing through (–16, 29) and (40, –6)

(a) -3/8

(b) 8/5

(c) -5/8

(d) -8/5

26. Find the equation of the line whose slope and y-intercept are -3 and -7

(a) 3x+y+7=0

(c) 3x+y-7=0

(b) 3x-y+7=0

(d) None of these

27. Find the distance between the two points (1,2) and (4,3).

(a) $\sqrt{6}$

(c) $\sqrt{5}$

(b) $\sqrt{10}$

(d) $\sqrt{3}$

28. Find the shape which is represented by the below points.

$$(0, 0), (3, 4), (0, 8) \text{ and } (-3, 4)$$

(a) Square

(c) Rectangle

(b) Triangle

(d) Rhombus

29. What is the name of the longest side in right angled triangle?

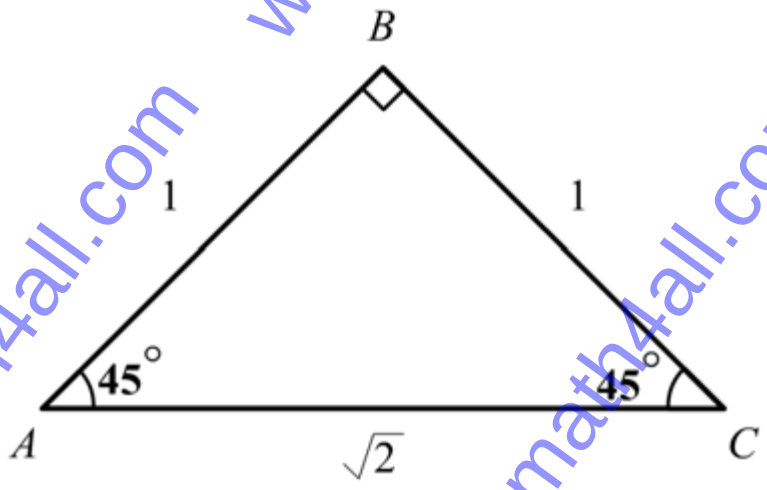
(a) Adjacent side

(c) Hypotenuse

(b) Opposite side

(d) None of these

30. What is the value of tan 45 in the figure given below?



(a) 1

(c) 3

(b) 1/2

(d) 2/3

31. Find the acute angle A

$$\text{if } \tan A = \frac{\sin 60^\circ}{1 + \cos 60^\circ}$$

(a) 45°

(b) 50°

(c) 60°

(d) 30°

32. A man is 20 m away from a building. The angle of elevation between the foot of the man and top of the building is 45°, Then the height of the building is

(a) 15

(b) 20

(c) 35

(d) 25

33. Find the geometric mean between 6 and 4.

(a) 6.9

(b) 7.9

(c) 4.9

(d) 8.9

34. Calculate the arithmetic mean for the following data.

Marks	65	70	75	80	85	90	100
No. of students	11	6	3	6	4	10	4

(a) 79.1

(c) 86.12

(b) 30.12

(d) 48.5

35. Calculate the median of the following table:

Variable (x)	5	10	15	20	25	30
Frequency(f)	3	6	10	8	2	3

(a) 51

(c) 52

(b) 25

(d) 15

36. A num number is 7 times greater than another number, if their sum is 96, then find the number.

(a) 44, 8

(c) 86, 5

(b) 84, 12

(d) 51, 3

37. Father is 4 times as old as his son. Twenty years hence, the father will be just twice as old as his son. Find the present age of the father.

(a) 35

(b) 15

(c) 24

(d) 40

38. In how much time will the simple interest on $600 be $300 at 10% per annum?

(a) 5 years

(b) 7 years

(c) 25 years

(d) 24 years

39. 40% of "x" is 360. What is the value of "x"?

(a) 287

(b) 225

(c) 289

(d) 291

40. A man sold two cycles at $990 each. On one, he gains 10% and on another he loses 10%. Find the gain or loss in the whole transaction.

(a) Loss 1%

(b) Profit 5%

(c) No profit and no loss

(d) None of these

41. A rectangular field is 45 m x 30 m. A 2 m wide path along the sides inside the field is to be constructed. Find the area of the path.

(a) 462 sq.m

(b) 256 sq.m

(c) 552 sq.m

(d) 755 sq.m

42. The volume of the cube is 125 cubic centimeter. Find the total surface area.

(a) 262 sq.cm

(b) 150 sq.cm

(c) 152 sq.cm

(d) 255 sq.cm

43. Which of the following number is a perfect square?

(a) 53

(b) 34

(c) 36

(d) 99

44. The side of a cube is 17.5 cm. Find the volume of the cube.

(a) 5359.375 cm^3

(b) 5501.253 cm^3

(c) 2509.375 cm^3

(d) 2350.526 cm^3

45. Find the cube root of (-125)

(a) -25

(b) 5

(c) -5

(d) 25

46. Find the square root of 962361

(a) 941

(b) 969

(c) 971

(d) 981

47. A goods train leaves a station at a certain time and at a fixed speed. After six hours, an express train leaves the same station and moves in the same direction at uniform speed of 90 km/hr. This train catches up the goods train in 4 hours. Find the speed of the goods train.

(a) 45 km/hr

(b) 36 km/hr

(c) 89 km/hr

(d) 56 km/hr

48. If the length of certain rectangle is decreased by 4 cm and the width is increased by 3 cm, a square with the same area as the original rectangle would result. Find the perimeter of the original rectangle.

(a) 50 cm

(b) 28 cm

(c) 33 cm

(d) 24 cm

49. When three coins are tossed, what is the probability for getting 4 heads?

(a) 1/2

(b) 1/13

(c) 5/8

(d) 0

50. If $x! = (x-1)!$, then the value of "x" is

(a) 2

(c) 1

(b) 0

(d) 9

Answers					
1. a	2. c	3. d	4. b	5. d	6. a
7. c	8. b	9. d	10. c	11. a	12. d
13. c	14. b	15. d	16. a	17. d	18. c
19. b	20. a	21. d	22. c	23. a	24. d
25. c	26. a	27. b	28. d	29. c	30. a
31. d	32. b	33. c	34. a	35. d	36. b
37. d	38. a	39. b	40. a	41. a	42. b
43. c	44. a	45. c	46. d	47. b	48. a
49. d	50. c				