World Mathematics Olympiad (WMO)
Standard: VII

Instructions:

There are three Sections and total 40 questions.
Attempt all the questions.
There is no negative marking for the wrong answers.
Time: 90 minutes

Doers Section

No. of Questions:30
Marks for each question: 2

1. On a number line, when we add a positive integer, we

   a. move to the right

   b. move to the left

   c. do not move

   d. none of the above

2. The addition of two negative integers give

   a. a positive integer

   b. a negative integer

   c. sometimes a positive integer, sometimes a negative integer

   d. none of the above

3. (-1) × (-1) × (-1) × ……… 99 times is equal to

   a. 1

b . (-1)

c. either 1 or -1

d. none of the above.

4. Which of the following is an improper fraction?

a. $\dfrac{1}{5}$

b. $\dfrac{2}{9}$

c. $\dfrac{7}{15}$

d. $\dfrac{31}{20}$

5. $2 + \dfrac{1}{4}$ is equal to

a. $\dfrac{7}{4}$

b. $\dfrac{9}{4}$

c. $\dfrac{5}{4}$

d. $\dfrac{11}{4}$

6. what is $\frac{1}{2}$ of 18 km?

    a 9 km

    b 18 km

    c 27 km

    d 13.5 km

7. A bus runs 20 km using 1 litre of petrol. How much distance will it cover in 1 1/4 litre of petrol?

    a. 25 km

    b. 30 km

    c. 36 km

    d. 40 km

8. What is m in the equation m – 6 = 1

    a. 1

    b. 6

    c. -7

    b. 7

9. If there are Z chairs in a row of the classroom, then the number of students who can sit in 8 rows is

    a. 8Z

    b. 8+Z

    c. $\frac{Z}{8}$

d. $\dfrac{Z}{8}$

10. Nine more than three times of a number x is

    a. 9x+3

    b. 3 x+9

    c. $\dfrac{X}{3}$

    d. 9-x=3

11. The complement of the angle 45° is

    a. 45°

    b. 40°

    c. 50°

    d. 135°

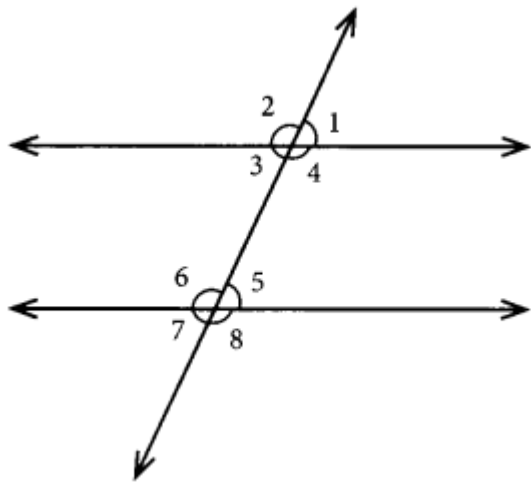12. The interior angles on the same side of the transversal which intersects two parallel lines are

    a. vertically opposite angles

    b. supplementary angles

    c. complementary angles
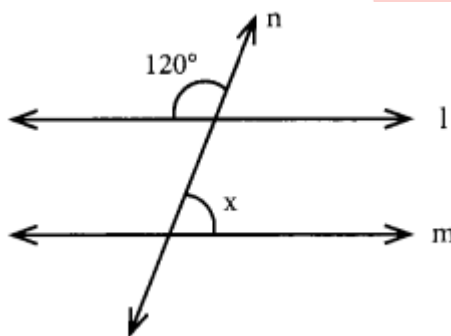
    d. alternate angles

13. Which one is not correct

a. ∠1 = ∠2

b. ∠2 = ∠4

c. ∠2 + ∠3 = 180°

d. ∠3 + ∠4 = 180°

14. Find the value of x in the following figure if l and m are parallel

a. 40°

b. 50°

c. 60°

d. 120°

15. Ana ate $\frac{3}{5}$ part of a pizza. The remaining pizza was eaten by Mike. What part of the

pizza was eaten by Mike?

a. $\frac{1}{5}$

b. $\frac{2}{5}$

c. $\frac{3}{5}$

d. None of the above

16. What is an equation for:

If I subtract 3 from 6 times a number, I get 9

a. 3x – 6 = 9

b. 6x – 3 = 9

c. 6x + 3 = 9

d. 3x + 6 = 9

17. How many lines of symmetry are there in an equilateral triangle?

a.1

b. 2

c. 3

d. 4

18. How many lines of symmetry are there in the following figure?

    a. 1

    b. 2

    c. 3

    d. 4

19. How many variables are there in 6x+9y+3

    a 1

    b 2

    c 3

    d 4

20. The value of $z^2 - 2z + 1$ when z = 1 is

    a. 1
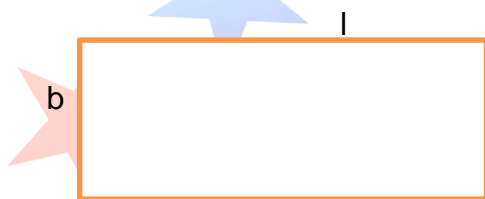
    b. 2

    c. (-2)

    d. 0

21. How many terms are there in $5x^2yz$?

    a 1

    b 2

    c 3

    d 4

22. How many lines of symmetry are there in a rectangle?

    a. 1

    b. 2

    c. 3

    d. 4

23. What is the perimeter of the following figure?

l

b

a. l+b
b. 2(l+b)
c. lxb
d. 2(lxb)

24. The area of a square plot is 1600 m². The side of the plot is

   a 40 m

  b 80 m

  c 120 m

  d 160 m

25. The cost of 4 m cloth is Rs 140. Find the cost of 9 m of cloth.

  a Rs 215

  b Rs 300

  c Rs 320

  d Rs 315

26. Interest on Rs 1000 at 10% p.a for one year is

   a. Rs 1

   b. Rs 10

   c. Rs 90

   d. Rs 100

27. By selling an article for Rs 150, a shopkeeper gains Rs 16. His gain per cent is

   a. 18%

   b. 24%

   c. 12%

   d. 50%

28. The cost of 10 m cloth is Rs 140. Find the cost of 9 m of cloth.

   a Rs 215

   b. Rs 126

   c Rs 320

   d Rs 315

29. The one's digit of the cube of the number 111 is

   a 1

   b 2

   c 3

   d 9.

30. A _____ can take various values.

a variable

b expression

c term

d None of these

31. Find the smallest number by which the number 250 must be divided to obtain a perfect cube.

a. 2

b. 3

c. 4

d. 5.

32. The area of a rectangular room is 150 m^2. If its breadth is 10 m, then find its length.
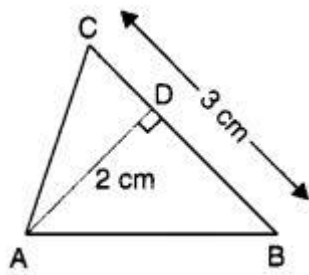
a. 15 m

b. 25 m

c. 50 m

d. 55 m

33. Find the area of Δ ABC

    a. 1 cm^2

    b. 2 cm^2

    c. 3 cm^2

    d. 4 cm^2

34. The angles of a triangle are in the ratio 1 : 1 : 2. What is the largest angle?
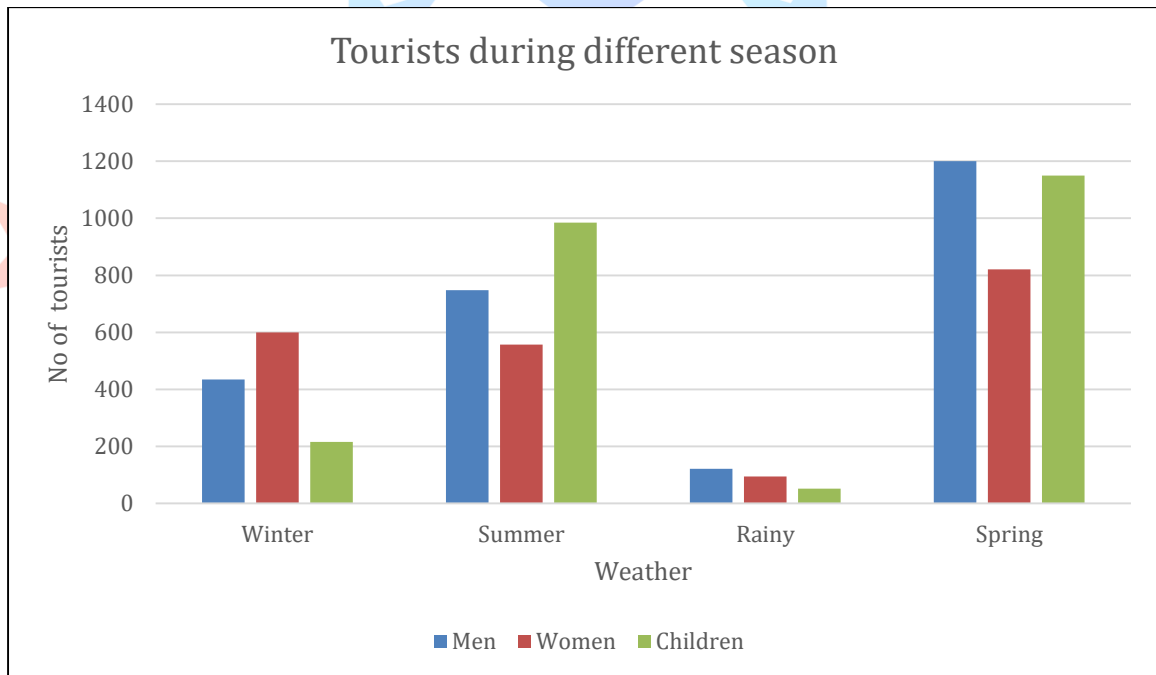
    a. 30°

    b. 45°

    c. 60°

    d. 90°

35. What is the coefficient of y in the given algebraic expression 92 + yz.

    a. 92

    b. 1

    c. z

    d. None of these

36.

Based on the above graph for tourists in a city during different seasons, match the following

A	Maximum number of tourists	I	Winter
B	Minimum number of tourists	II	Summer
C	Women tourists are more than men tourist	III	Rainy
B	About 1000 children are going on tour	IV	Spring

Options

   a. A-I, B-II, C-IV, D-III
   b. A-IV, B-II, C-III, D-I
   c. A-IV, B-III, C-I, D-II
   d. A-II, B-III, C-IV, D-II

37. A glass of cylindrical shape has a radius of 3.5cm and height equal to 8cm. A water jug has a volume equal to 1540cm^3. How many times the water has to be poured from the glass to fill the jug completely? (Take π = 22/7)

    a. 6

    b. 5

    c. 4.5

    d. 4

38. What cross-section do you get when you give a horizontal cut to an ice cream cone?

    a. Triangle

    b. Circle

    c. Rectangle

    d. Square

39 Which one is true?

    a. $10 \times 10^{11} = 100^{11}$

    b. $2^3 \times 3^2 = 6^5$

    c. $Y^0 = 1000^0$

    d. $2^3 > 3^2$

40. What is the probability of getting 1, when a dice is thrown?

    a. $\dfrac{1}{2}$

    b. $\dfrac{1}{4}$

    c. $\dfrac{1}{6}$

    d. $\dfrac{1}{8}$