Brihan Mumbai Ganit Adhyapak Mandal, Mumbai
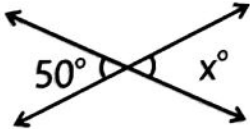
Date : 27-7-2019   Maths Concept Exam 2019   Time : 3 p.m. to 5 p.m.
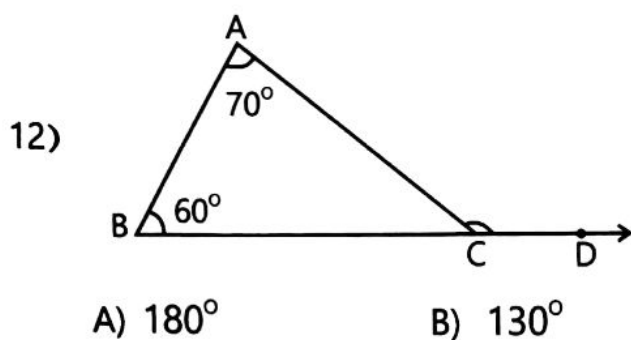
Std. : VIII   Max. Marks : 100

Instructions :
1) Question paper and answersheet are separate.
2) Rough work is to be done in the space provided in each page of the question paper.
3) Do not fold the answersheet.
4) Colour the correct alternative with the ball-pen as follows.

For Example :
How many days does the month of March have ?
A) 30   B) 31   C) 29   D) 28
Correct answer is B; so B should be coloured as shown below.

A)   Ⓑ   C)   D)

1) How do you write 19 in Roman numerals ?

A) XVIIII   B) IXX   C) XIX   D) XXI

2) If given number is divisible by 15, find the smallest digit at the place of star ?

345★75

A) 3   B) 0   C) 1   D) 6

3) The product of two numbers is 1350 and their L.C.M. is 90. Find the H.C.F..

A) 45   B) 15   C) 30   D) None of these.

4) Observe the adjoining figure and find x ?

A) 50°   B) 100°   C) 130°   D) $(180 - x)°$

5) In the given series. A, -3, -1, 1, 3, B ; A = ? B = ?

A) A = -2, B = 4   B) A = -5, B = 5   C) A = -4, B = 4   D) None of these

6) I bought 12 pencils for Rs. 24. What will be the cost of 1.5 dozen pencils ?

A) Rs. 36   B) Rs. 2 x 1.5   C) Rs. 30   D) Rs. 18

7) Convert the given fraction into decimal fraction. $\frac{9}{8}$ = ?

A) 0.98   B) 9.8   C) 1.125   D) 0.1125

8) If 503 x 217 = 109151 then 0.503 x 2.17 = ?

A) 10915.1   B) 10.9151   C) 0.109151   D) 1.09151

9) Out of 1200 marks, Ram scored 1080 marks. What percentage of marks Ram scored ?

A) 90%   B) 9%   C) 75%   D) 40%

10) If cost price is Rs. 1600, Selling price is Rs. 2400, What is the profit percentage ?

A) $\frac{100}{3}$ %   B) 80%   C) 50%   D) None of these

11) What is the sum of interior angles of a pentagon ?

A) 360°   B) 180°   C) 540°   D) 450°
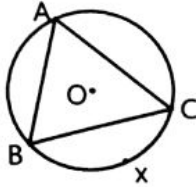
12)

In the adjoining figure, find measure of ∠ACD

A) 180°   B) 130°   C) 50°   D) 70°

②

13) Simplify

3 - [3 - { 6 - (5 - 4 - 3) }]

A) 4   B) -2   C) 8   D) 2

14)

In the adjoining figure,
O is the centre of the circle and
△ABC is an equilateral triangle.
Find measure of arc BXC.

A) 60° B) 120° C) 90° D) 180°

15) 18% of 3.4 = x% of 34 find x.

A) 180   B) 0.18   C) 1.8   D) 0.018

16) $\dfrac{3^a \times 7^{10}}{3^2 \times 7^4} = 3^4 \times 7^6 \therefore a = ?$

A) 6   B) 8   C) 2   D) 9

17) A bottle contains 75ml. of oil. How many bottles will be required to fill one and half litre of oil ?

A) 75   B) 200   C) 20   D) 35

18) The length, breadth and height of a rectangular tank are 9 metre, 7 metre and 4 metre respectively. What is the volume of water if tank is $\frac{2}{3}$ filled ?

A) 252 cu.m.   B) 126 cu.m.   C) 168 cu.m.   D) 504 cu.m.

③

19) Solve. $268 + 1375 + 6179 - 168 - 1275 - 6079$

   A) 300   B) 3000   C) 2100   D) 3075

20) Simplify.

   $$\frac{28 \times 26 \times 24 \times 22}{11 \times 12 \times 13 \times 14}$$

   A) $(-2)^4$ B) 8^2 C) 2^8 D) None of these

21) What is the interest on Rs. 5000 invested at 10% for 2 years ?

   A) Rs. 100   B) Rs. 1000   C) Rs. 10000   D) Rs. 10

22) The radius of a semicircular cardboard is 7 cm. Find its perimeter.

   A) 36 cm.   B) 44 cm.   C) 22 cm.   D) 29 cm.

23) Simplify.

   $$\sqrt{\frac{\sqrt{81} + \sqrt{256} + 39}{\sqrt{169} - \sqrt{49} - 2}}$$

   A) 6   B) 8   C) 4   D) 2

24) If 42 workers complete a work in 18 days; in how many days will 6 workers complete it ?

   A) 90   B) 126   C) 108   D) 42

25) Find x, If $4x + 15 = 9x - 5$

   A) 4   B) 1   C) 5   D) $\frac{20}{13}$

④

26) The angles of a quadrilateral are in the ratio 1 : 2 : 4 : 3.
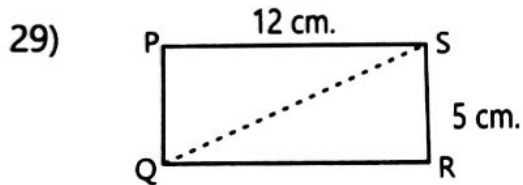   Then which of the following statements is true ?

   A) It is a parallelogram.   B) It is a cyclic quadrilateral

   C) It is a trapezium   D) It is a rhombus.

27) $2^0 \times 3^0 + (2^0 + 3^0) + (2^0 - 3^0) \times 2^0 + 3^0$ = ?

   A) 4   B) 3   C) 5   D) 1

28) $\dfrac{x^2 - 4x + 4}{x^2 - 4}$ = ?

   A) x + 4   B) $\dfrac{x - 2}{x + 2}$ C) $\dfrac{x + 2}{x - 2}$ D) 4x

29)   □ PQRS is a rectangle, l(PS) = 12 cm.,
   l(SR) = 5 cm. Find the length of seg QS.

   A) 17 cm.   B) 7 cm.   C) 13 cm.   D) 60 cm.

30) If $\sqrt{9801}$ = 99 then $\sqrt{0.009801}$ = ?

   A) 9.9   B) 0.099   C) 990   D) 0.99

31) In ΔABC, seg (AB) ≅ seg (BC), ℓ(AC) = 16 cm. , ℓ(AB) = 10 cm.
   Find the length of the altitude BD ?

   A) 8 cm.   B) 5 cm.   C) 6 cm.   D) 3 cm.

⑤

32) A rectangular ground is 108 metres long and 32 metres broad.
Seema takes one round to the ground. How much did she walk ?

    A) 140 m.   B) 3456 m.   C) 92 m.   D) 280 m.

33) $(x - \dfrac{1}{x})^2 = ?$

    A) $x^2 + \dfrac{1}{x^2}$ B) $x^2 - \dfrac{1}{x^2}$ C) $x^2 - 2 + \dfrac{1}{x^2}$ D) $x^2 - 2 - \dfrac{1}{x^2}$
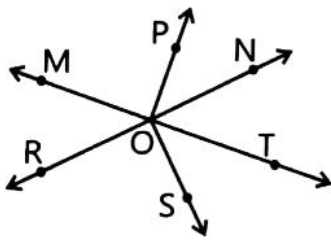
34) The number of faces of a pentagonal Prism is .... ?

    A) 7   B) 5   C) 6   D) 10

35) In $\square$ ABCD, $\angle A = 105°$, $\angle B = 37°$, $\angle C = 83°$, then find the measure of $\angle D$

    A) $105°$ B) $135°$ C) $18°$ D) $225°$

36) In adjoining figure which are the collinear points ?

    A) R, O, N   B) M, O, S

    C) P, O, R   D) M, O, N

37) Write the proper sign from >, < or = in the box.

-100 $\boxed{}$ 1

    A) <   B) >   C) =   D) None of these.

38) If A = -4 and B = -9 then A - (-B) = ?

    A) -13   B) +13   C) 5   D) -5

⑥

39) Bharati grows potatos in $\frac{2}{5}$ part of her garden, leafy vegetables in $\frac{1}{3}$ part and brinjals in the remaining part. In how much of her plot did she plant brinjals ?

A) $\frac{4}{15}$ B) $\frac{15}{4}$ C) $\frac{3}{8}$ D) $\frac{1}{2}$

40) Simplify.

$$\frac{5}{9} \div \frac{3}{2} \times \frac{9}{10} = ?$$

A) $\frac{100}{3}$ B) $\frac{1}{3}$ C) $\frac{2}{3}$ D) $\frac{4}{3}$

41) Solve.

200.005 - 17.18

A) 182.815 B) 182.825 C) 182.987 D) 1828.25

42) How many axes of symmetry are there to the Parallelogram ?

A) 1 B) 2 C) 4 D) 0

43) Find the 2 digit greatest number which is divisible by 6, 9 and 12.

A) 36 B) 72 C) 108 D) 99

44) $(5x + 3y)(3x - y) = ?$

A) $15x^2 - 4xy - 3y^2$ B) $15x^2 + 4xy + 3y^2$ C) $15x^2 - 14xy - 3y^2$ D) $15x^2 + 4xy - 3y^2$

45) Find the average of all two digit prime numbers between 10 to 20.

A) 17 B) 15 C) 12 D) 13

46) If $x + \dfrac{1}{x} = 4$ then find the value of $x^2 + \dfrac{1}{x^2}$

    A) 16   B) 14   C) 18   D) 20

47) Find the ratio of 125 cm. to 1 metre.

    A) 1 : 8   B) 5 : 4   C) 4 : 5   D) 8 : 1

48) Shambhavi's sister is 4 years elder than her. Sum of their ages is 10 years.

    Find Shambhavi's age ?

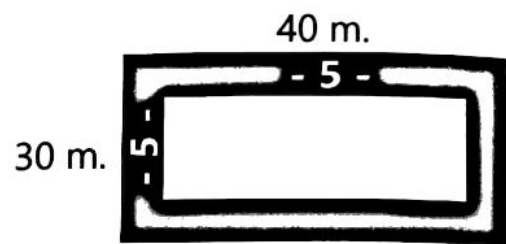   A) 6 years   B) 5 years   C) 3 years   D) 14 years

49) In the adjoining figure, there is a road 5 metres broad inside the ground of 40 metres long and 30 metres broad. Find the area of the road.

40 m.

-5-

30 m.

5

    A) 1200 sq. m.   B) 600 sq. m.   C) 800 sq. m.   D) 1000 sq. m.

50) If $\dfrac{3x}{2} = y + 2$ then $3x - 2y = ?$

    A) 2   B) 4   C) 1   D) 3

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