

Brihan Mumbai Ganit Adhyapak Mandal, Mumbai

Date : 26-7-2025

Maths Concept Exam 2025

Time : 3 p.m. to 5 p.m.

Std. : VIII / IX

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) **B)** C) D)

- 1) Angles of a triangle are $(3x-5)^\circ$, $(x-5)^\circ$ and $(2x+10)^\circ$. Find the value of x .

A) 30 B) 60 C) 90 D) 25

- 2) If $\frac{3}{8}$ part of a number is 150, then the number is _____.

A) 300 B) 400 C) 800 D) 200

- 3) Convert $2\frac{3}{8}$ into decimal form.

A) 23.75 B) 2.15 C) 2.375 D) 2.5

- 4) $(\frac{3x^2}{7y}) \times (-\frac{14y^2}{5z}) \times (\frac{10xyz}{6}) = ?$

A) $-2x^3y^2$ B) $2y^3x^3$ C) $2xy^3$ D) $-2x^3y$

- 5) $m^{\frac{1}{5}} \times m^{\square} = m$, then the number in the $\square = ?$

A) $\frac{17}{6}$ B) $\frac{4}{5}$ C) $\frac{5}{4}$ D) $\frac{5}{1}$

- 6) How many axes of symmetry does a square have?
 A) 0 B) 1 C) 2 D) 4
- 7) Rs. $100\frac{1}{2}$ are equally divided among 5 boys, how many rupees will each boy get?
 A) 20.20 B) 20.01 C) 20.5 D) 20.10
- 8) $(-7\frac{1}{3}) \times (-3\frac{1}{7}) = ?$
 A) $-\frac{22}{21}$ B) $23\frac{1}{21}$ C) $-\frac{21}{22}$ D) $22\frac{2}{21}$
- 9) Ram bought a bicycle for Rs. 15000. After 2 years he sold it for Rs. 12000. Find the loss percent.
 A) 10 B) 20 C) 30 D) 5
- 10) Find the ratio of 250 gm to 1.5 Kg.
 A) 3:5 B) 5:3 C) 1:6 D) 6:1
- 11) Circumference of a circle is 88 cm. Find the diameter of the circle. ($\pi = \frac{22}{7}$)
 A) 28 cm B) 7 cm C) 14 cm D) 56 cm
- 12) Simplify: $\frac{1}{3} - \frac{5}{6} + \frac{7}{12}$
 A) $\frac{1}{2}$ B) $\frac{5}{12}$ C) $\frac{7}{6}$ D) $\frac{1}{12}$
- 13) What is the total surface area of a cube with each side 0.6 cm?
 A) 2.16 cm^2 B) 0.216 cm^2 C) 0.36 cm^2 D) 0.0006 cm^2

14) A certain work can be finished in 6 days by 10 workers. How many workers are required to finish the same work in 4 days?

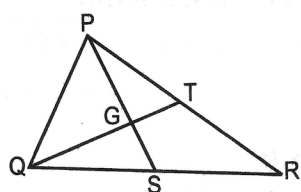
- A) 30 B) 15 C) 20 D) 8

15) Out of the following statements, which are not true ?

- a) Every square is a rectangle.
b) Every rhombus is a square.
c) Every square is a parallelogram.
d) Every rectangle is a parallelogram.

- A) a, b B) b C) c D) c, d

16) In the adjoining figure, PS and QT are the medians of $\triangle PQR$.



If $PG = 4\text{ cm}$, what is the length of seg PS ?

- A) 8 cm B) 6 cm C) $\frac{4}{3}$ cm D) Data insufficient

17) If $(2x - y)^2 = 4x^2 - my + y^2$, then $m = ?$

- A) $4x$ B) $4xy$ C) xy D) $-4xy$

18) Which of the following groups of numbers represents a pythagorean triplet ?

(1,1,2), (2,4,9), (5,7,11), (20,15,25)

- A) (5,7,11) B) (1,1,2) C) (2,4,9) D) (20,15,25)

19) Anil and Sunil invested Rs. five lakh in the ratio 2 : 3. At the end of the year they got profit of Rs. 60,000. Find Sunil's share of profit.

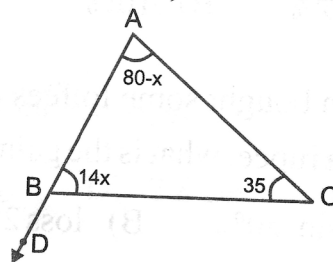
- A) Rs. 24,000 B) Rs. 36,000 C) Rs. 12,000 D) Rs. 48,000

- 20) The average of five consecutive odd numbers is 17. Which is the biggest number among those numbers ?
- A) 23 B) 21 C) 25 D) 28
- 21) Solve : $3(x-1) = x+5$
- A) $x=2$ B) $x=4$ C) $x=6$ D) $x=16$
- 22) Ashish deposited Rs. 20,000 at the rate 7.5 p.c.p.a. by simple interest. How much amount will he get after 3 years?
- A) Rs. 25,400 B) Rs. 24,500 C) Rs. 29,000 D) Rs. 20,450
- 23) $a+b=6$, $ab=2.5$, find the value of a^2+b^2
- A) 31 B) 36 C) 38.5 D) 38.6
- 24) On dividing a certain number by 3, 5, 7, 8, the remainder is always 2. What is the smallest such number ?
- A) 840 B) 838 C) 842 D) 800
- 25) Factorize $3x^2 - 48y^2$
- A) $(3x-4y)(3x+4y)$ B) $(3x-16y)(3x+16y)$
C) $3(x-4y)(x+4y)$ D) $3(x+4y)(x+12y)$
- 26) Find the value of $\frac{2^3 \times 3^5 \times 2^2}{2 \times 3}$
- A) 5^4 B) 2^4 C) 3^4 D) 6^4

- 27) How can 0.00000003456 be written in standard form?
 A) 3.456×10^{-8} B) 34.56×10^{-8} C) 0.3456×10^{-8} D) 3.456×10^8
- 28) A shopkeeper sold a shirt with 12% discount on printed price.
 If the printed price is Rs. 740, what is the selling price of the shirt?
 A) Rs. 650.20 B) Rs. 651.20 C) Rs. 652.80 D) Rs. 628
- 29) Angles of a triangle are in the ratio 4 : 3 : 2, what is the type of that triangle?
 A) Acute angled triangle B) Right angled triangle
 C) Equilateral triangle D) Isosceles triangle
- 30) $\sqrt{1849} = 43 \therefore \sqrt{18.49} + \sqrt{0.1849} = ?$
 A) 4.73 B) 86 C) 43.43 D) 4.743
- 31) The measure of an angle is double the measure of its complementary angle.
 What is the measure of that angle?
 A) 30° B) 60° C) 90° D) 25°
- 32) Mandavi Express left Dadar at 7:32 and reached Ratnagiri at 14:00. Find the time required to reach Ratnagiri from Dadar.
 A) 6 hr. 28 min. B) 21 hr. 32 min. C) 6 hr. 68 min. D) 7 hr. 8 min.

33) Using the adjoining figure, find $m\angle CBD$

- A) 110° B) 5°
 C) 75° D) 175°



34) $(x+4)(x-5) = ?$

- A) $x^2 - 20$ B) $x^2 - 9x - 20$ C) $x^2 + x - 20$ D) $x^2 - x - 20$

35) If the measure of a minor arc of a circle is 73° , find the measure of its corresponding major arc.

- A) 17° B) 107° C) 287° D) 173°

36) Anita's age is 3 less than twice the age of her younger brother. If Anita is 15 years old, find the age of her brother.

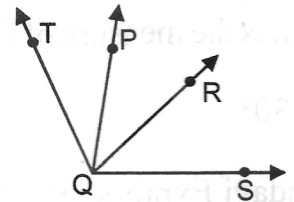
- A) 12 years B) 18 years C) 9 years D) 6 years

37) If 72A03 is divisible by 11 as well as 3, then $A = ?$

- A) 3 B) 1 C) 2 D) 6

38) Using the adjacent figure, which angle is the adjacent angle of $\angle PQS$?

- A) $\angle PQR$ B) $\angle PQT$ C) $\angle RQS$ D) $\angle TQR$



39) $2 : 5$ is written in the percentage form as _____.

- A) 25% B) 10% C) 40% D) 52%

40) A man bought some toffees at the rate 3 toffees for a rupee and sold at the rate 2 for a rupee. what is the gain or loss percent?

- A) gain 50% B) loss 20% C) gain 35% D) gain 6%

41) If we subtract $(5xy + 7yz - 9xz)$ from $(3xy - 2yz + xz)$ then the answer is _____.

- A) $(2xy + 5yz - 8xz)$ B) $(-2xy - 9yz + 10xz)$
C) $(8xy + 5yz - 8xz)$ D) $(2xy + 5yz + 10xz)$

42) $\left[\left(\frac{2}{5}\right)^3\right]^{-1} \div \left[\left(\frac{2}{5}\right)^2\right]^{-2} = ?$

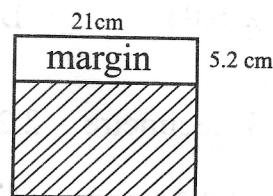
- A) $\frac{2}{5}$ B) $\frac{5}{7}$ C) $\frac{8}{125}$ D) $\frac{-2}{5}$

43) Which is the smallest number among $\frac{2}{3}$, $\frac{8}{9}$, $\frac{63}{81}$, $\frac{10}{27}$?

- A) $\frac{2}{3}$ B) $\frac{8}{9}$ C) $\frac{63}{81}$ D) $\frac{10}{27}$

44) A rectangular paper sheet of length 30 cm and breadth 21 cm has upper margin of 5.2 cm.

find the area of the shaded region.



- A) 109.2 sq. cm B) 620 sq. cm C) 520.8 sq. cm D) 156.0 sq. cm

5) If $x^2 + \frac{1}{x^2} = 5$, find the value of $x - \frac{1}{x}$

- A) ± 3 B) $\pm \sqrt{3}$ C) ± 7 D) $\pm \sqrt{7}$

6) Area of a triangle is 12.04 sq. cm and its base is 5.6 cm. Find its height.

- A) 4.3 cm B) 6.02 cm C) 8.6 cm D) 2.8 cm

- 47) If the length and breadth of a rectangle are 25 cm and 4 cm respectively, find the side of a square having area equal to the area of the rectangle.
- A) 5 cm B) 2 cm C) 100 cm D) 10 cm
- 48) What is the measure of the corresponding reflex angle of the angle having measure 37° ?
- A) 143° B) 217° C) 323° D) 180°
- 49) $\frac{(5.68)^2 - (0.37)^2}{(5.68) - (0.37)} = ?$
- A) 6.05 B) 5.26 C) 36 D) 4.26
- 50) 22.3 decimetre - 2.23 cm = ?
- A) 20.7 cm B) 2.07 cm C) 220.77 cm D) 20.77 cm
