

PRACTICE QUESTIONS SHEET FOR MATHS CLASS 10

A Compilation By

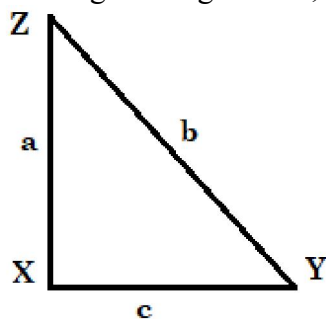
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01. $\sqrt{5} - 3 + \sqrt{2}$ is
 (a) a rational number (b) a natural number
 (c) equal to zero (d) an irrational number
02. A quadratic polynomial whose zeroes are -3 and -4 , is
 (a) $x^2 - x + 12$ (b) $x^2 + x + 12$ (c) $x^2 - x - 12$ (d) $x^2 + 7x + 12$
03. The pair of linear equations $(3k+1)x + 3y - 5 = 0$ and $2x - 3y + 5 = 0$ have infinite number of solutions. Then the value of k is
 (a) 1 (b) 0 (c) 2 (d) -1
04. The distance between the points $A(0, 7)$ and $B(0, -3)$ is
 (a) 4 units (b) 10 units (c) 7 units (d) 3 units
05. A bag has 9 black balls and 3 white balls. A ball is drawn at random from the bag. What is the probability of getting a white ball?
 (a) $\frac{3}{4}$ (b) $\frac{1}{4}$ (c) $\frac{4}{9}$ (d) $\frac{5}{9}$
06. If $\triangle ABC$ is right angled at B , then the value of $\cos(A+C)$ is
 (a) 0 (b) 1 (c) $\frac{1}{2}$ (d) not defined
07. It is proposed to build a single circular park equal in area to the sum of areas to two circular parks of diameters 16 m and 12 m in a locality. The radius of the new park would be
 (a) 10 m (b) 15 m (c) 20 m (d) 24 m
08. The probability of getting a bad egg in a lot of 400 is 0.035. The number of bad eggs in the lot is
 (a) 7 (b) 14 (c) 21 (d) 28
09. Let $x = \frac{7}{20 \times 25}$ be a rational number. Then x has decimal expansion, which terminates after
 (a) four places of decimal (b) three places of decimal
 (c) two places of decimal (d) five places of decimal
10. If p is a prime number and p divides k^2 , then p divides
 (a) $2k^2$ (b) k (c) $3k$ (d) None of these
11. The father's age is six times his son's age. Four years hence, the age of the father will be four times his son's age. The present ages (in years) of the son and the father are, respectively

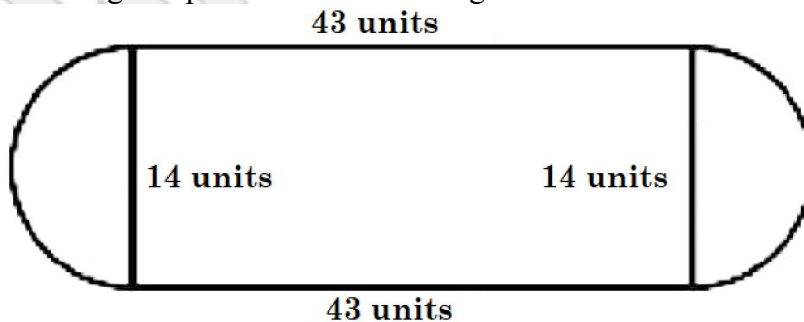
- (a) 4 and 24 (b) 5 and 30 (c) 6 and 36 (d) 3 and 24
12. The points at which the graph lines of the equations $ax + by = 0$ and $ax - by = 0$ intersect is
 (a) $(a, 0)$ (b) $(b, 0)$ (c) $(0, 0)$ (d) (a, b)
13. The measure of angle included between the lines represented by $x = 0$, $y = 0$ and the coordinates of the point of intersection of these lines are respectively
 (a) $180^\circ, (1, 1)$ (b) $90^\circ, (0, 0)$
 (c) $120^\circ, (0, 1)$ (d) $60^\circ, (1, 0)$
14. XY is drawn parallel to the base BC of a ΔABC cutting AB at X and AC at Y. If $AB = 4BX$ and $YC = 2$ cm, then AY is
 (a) 2 cm (b) 6 cm (c) 8 cm (d) 4 cm
15. $(1 + \tan A + \sec A)(1 + \cot A - \operatorname{cosec} A) =$
 (a) 0 (b) 1 (c) 2 (d) -1
16. If $\sin \theta = \frac{a}{b}$, then $\cos \theta$ is equal to
 (a) $\frac{b}{\sqrt{b^2 - a^2}}$ (b) $\frac{b}{a}$ (c) $\frac{\sqrt{b^2 - a^2}}{b}$ (d) $\frac{a}{\sqrt{b^2 - a^2}}$
17. The diameters of two circles are 38 cm and 18 cm. Then, the diameter of the circle having circumference equal to the sum of circumference of the two circles is
 (a) 56 cm (b) 52 cm (c) 48 cm (d) 50 cm
18. The probability that a non leap year selected at random will contain 53 Sundays is
 (a) $\frac{1}{7}$ (b) $\frac{2}{7}$ (c) $\frac{3}{7}$ (d) $\frac{5}{7}$
19. If the HCF of 408 and 1032 is expressible in the form $1032m - 408 \times 5$, then the value of m is
 (a) 4 (b) 3 (c) 1 (d) 2
20. The points $(-5, 0)$, $(5, 0)$, $(0, 4)$ are the vertices of
 (a) an equilateral triangle (b) an isosceles triangle
 (c) a right triangle (d) a scalene triangle
21. A number when divided by 61 gives 27 quotient and 32 as remainder is
 (a) 1679 (b) 1664 (c) 1449 (d) None of these
22. HCF (2, 11) is
 (a) 22 (b) 1 (c) 2 (d) 0
23. The largest number which divides 70 and 125, leaving remainders 5 and 8, respectively is
 (a) 13 (b) 65 (c) 875 (d) 1750
24. If 2 and 3 are the zeroes of the polynomial $3x^2 - 2kx + 2m$, then the values of k and m are
 (a) $9, \frac{7}{2}$ (b) 7, 9 (c) $9, \frac{15}{2}$ (d) None of these
25. The x coordinate of the point which lies on the line represented by $2x - y - 7 = 0$ and whose y coordinate is 13 is
 (a) 4 (b) 5 (c) 6 (d) 10
26. If $bx + ay = a^2 + b^2$ and $ax - by = 0$, then the value of $x - y$ is
 (a) $a - b$ (b) $b - a$ (c) $a^2 - b^2$ (d) $b^2 + a^2$
27. Point A is on the y-axis at a distance 4 units from the origin. If $B(-3, 0)$, then the length AB is

- (a) 7 units (b) 5 units (c) 49 units (d) 25 units
28. If the point $(x, 4)$ lies on a circle whose centre is $O(0, 0)$ and radius is 5, then x is equal to
 (a) ± 5 (b) ± 3 (c) 0 (d) ± 4
29. If $A(5, p)$, $B(1, 5)$, $C(2, 1)$ and $D(6, 2)$ are the vertices of a square then
 (a) $p = 7$ (b) $p = 3$ (c) $p = 6$ (d) $p = 8$
30. A ball manufacturer notices that 40% of the produced balls are defective and are rejected, then what is the probability of non-defective balls?
 (a) 0.4 (b) 0.5 (c) 0.6 (d) 0.06
31. Consider the following diagram of a right triangle XYZ, where $\angle ZXY = 90^\circ$.




Then, $\sin Y + \tan Y$ equals

- (a) $\frac{1}{abc}(b+c)$ (b) $\frac{c}{bc}(b+c)$ (c) $\frac{a}{bc}(b+c)$ (d) $\frac{b}{ca}(b+c)$
32. If $x = \sin 30^\circ$ and $y = \cos 0^\circ$, then $(y)^x =$
 (a) $\frac{1}{2}$ (b) 0 (c) ± 1 (d) 1
33. If $\cos q = \frac{1}{2}$, then the value of $(\cos q - \sec q)$ is
 (a) $\frac{3}{2}$ (b) $-\frac{3}{2}$ (c) $\frac{\sqrt{3}}{2}$ (d) $-\frac{\sqrt{3}}{2}$
34. If $\cos q = \frac{2}{3}$, then $2 \sec^2 q + 2 \tan^2 q - 7$ is equal to
 (a) 1 (b) 0 (c) 3 (d) 4
35. The perimeter of a quadrant of a circle of radius 7.2 cm is
 (a) 25.7 cm (b) 12.5 cm (c) 7.5 cm (d) 3.5 cm
36. The perimeter of the given plot as shown in the figure is



- (a) 260 units (b) 240 units (c) 130 units (d) 180 units
37. A pendulum swings through an angle of 36° and describes an arc 13.2 cm. Then, the length of thread (to which it is tied) will be
 (a) 21 cm (b) 22 cm (c) 25 cm (d) 24 cm

38. If $2x = \operatorname{cosec} A$ and $\frac{2}{x} = \cot A$, then the value of $4\left(x^2 - \frac{1}{x^2}\right)$ is
 (a) -1 (b) $\frac{1}{2}$ (c) 1 (d) 2
39. If a die is thrown once, the probability of getting a perfect square is
 (a) $\frac{1}{3}$ (b) $\frac{1}{4}$ (c) $\frac{2}{3}$ (d) $\frac{3}{4}$
40. If three unbiased coins are tossed, then the probability of getting either three heads or three tails is
 (a) $\frac{3}{4}$ (b) $\frac{1}{4}$ (c) $\frac{1}{3}$ (d) $\frac{2}{3}$

 If you've any doubt or want help, please post the image (screenshot) of your question in the Telegram Group <https://t.me/Mathematicia4Tenth>

 For YouTube Lectures (MCQ Type) :

Visit YouTube channel **Mathematicia By O.P. Gupta**

 For Chapter-wise Assignments :

Visit <https://theopgupta.com/>

ANSWER KEY

01.	(d)	02.	(d)	03.	(d)	04.	(b)	05.	(a)	06.	(a)
07.	(a)	08.	(b)	09.	(b)	10.	(b)	11.	(c)	12.	(c)
13.	(b)	14.	(b)	15.	(c)	16.	(c)	17.	(a)	18.	(a)
19.	(d)	20.	(b)	21.	(a)	22.	(b)	23.	(a)	24.	(c)
25.	(d)	26.	(b)	27.	(b)	28.	(b)	29.	(c)	30.	(c)
31.	(c)	32.	(d)	33.	(b)	34.	(b)	35.	(a)	36.	(c)
37.	(a)	38.	(c)	39.	(a)	40.	(b)				