

KENDRIYA VIDYALAYA SANGATHAN
MUMBAI REGION
PREBOARD EXAMINATION-(2025-26)
Class-10
MATHEMATICS (BASIC)
Marking Scheme

Section A

1.	(d) 91	1
2.	(d) $x^2 + \sqrt{5}$	1
3.	(d) $k \neq 3$	1
4.	(b) -1	1
5.	(d) 28	1
6.	(a) 4	1
7.	(b) 1 : 2	1
8.	(d) RHS	1
9.	(a)(0,0)	1
10.	(b) 24 cm	1
11.	(c) 70^0	1
12.	a) $\cos^2 A$	1
13.	(d) $2\sqrt{7}$	1
14.	(c) 45	1
15.	(b) 462 cm^2	1
16.	(b) 45°	1
17.	(b) mode = 3 median – 2 mean	1
18.	(b) -1.5	1
19.	(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A) .	1
20.	(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A) .	1
21.	For finding LCM - 24 minutes For writing correct time 7:24 am OR finding other number 30 for finding HCF - 30	1 1 1 1
22.	For a = 2 For radius = $\sqrt{13}$	1 1
23.	For finding $\sin\theta = 3/5$ and $\cos\theta = 4/5$ For correct answer $\frac{1}{2}$ or For correct values of trigonometric ratios For correct answer = 2	1 1 1 1
24.	For $\alpha + \beta = 5/2$ and $\alpha\beta = 7/2$ or for finding correct roots $1/\alpha + 1/\beta = (\alpha + \beta) / (\alpha\beta)$ or for substituting roots and finding correct answer = $(5/2) \div (7/2)$	1 1

	= 5/7	
25.	For correct equation $x^2 - 27x + 182 = 0$ For correct solution and numbers 13,14	1 1
26.	For correct proof	3
27.	For finding $a_1 = 4$ For $a_2 = 14$ and $a_{10} = 94$ For $a_n = 10n - 6$	1 1 1
28.	For correct graph For cost of 1 notebook = 12 And cost of 1 pen = 4 OR $x + y = 9$ $x - y = -3$ number 36	2 1 1 1
29.	For correct proof	3
30.	For correct proof	3
31.	For median formula For substituting correct values in formula For calculation and $k = 6$ (OR) For mode formula For substituting correct values in formula For calculation and mode = 172.5	1 1 1 1 1 1
32.	For correct statement and figure For given, to prove and construction For correct proof	1.5 1.5 2
33.	Given distance=360 km. Let the speed of the train be x km/hr. Speed when increased by 5 km/hr $= (x+5)$ km/hr $360/x - 360/(x+5) = 1$ $[360x + 1800 - 360x]/x(x+5) = 1$ $x^2 + 5x - 1800 = 0$ $x^2 + 45x - 40x - 1800 = 0$ $x(x+45) - 40(x+45) = 0$ $(x-40)(x+45) = 0$ $x = 40, -45$ The speed of the train is 40 km/hr. OR The area of entire rectangular park = 2400 m^2 The width of path as x meter And area of inner rectangle $(60-2x)(40-2x)$ To setup the equation of area of path and quadratic equation for the solution of x $x^2 - 50x + 96 = 0$ for finding correct value $x = 2$ and rejecting $x = 48$	1 1 1 1 1 1 1 1 2 1
34.	Total surface area of the remaining solid = CSA of the cylinder + area of base of a cylinder + CSA of hemisphere For correct formula For correct calculation and answer 902 cm^2 For amount of wood remaining in the solid = Volume of cylinder – Volume of hemisphere and formula For correct calculation and answer $2464/3 \text{ cm}^3$	1 1 1 1 1

35.	For correct figure	1
	For finding the horizontal distance between the building and the tower $\frac{50}{\sqrt{3}}$ m	2
	For correct calculation and answer $\frac{50}{3}$ m	2
	OR	
	For finding correct figure	1
	To find the horizontal distance between the building and tower 40m	2
36.	The height of building $\frac{40(3-\sqrt{3})}{3}$ or 16.90 approx	2
	1) 2/5	1
	2) 17/20	1
	3) 11/20 OR 1/20	2
37.	1) $\frac{\text{Arc length} \times \text{radius}}{2}$	1
	2) $98\pi \text{ m}^2$	1
	3) 45° OR 239.56 m^2	2
38.	(1) 2	1
	(2) 2	1
	(3) For correct proof	2