B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL
TERM 1 EXAMINATION (2026-27)
MARKING KEY MATHEMATICS: SET 1

Class: VIII | **Time: 3hrs**
Date: 09-09-26 | **Max Marks: 80**
Admission no: | **Roll no:**

General instructions:
1. The Question paper contains- five sections A, B, C, D and E. Each section is compulsory. However, there are internal choices in some questions.
2. Section A has 18 MCQ's and 02 Assertion-Reason based questions of 1 mark each.
3. Section B has 5 very short (VSA)- type questions of 2 marks each.
4. Section C has 6 short (SA)- type questions of 3 marks each.
5. Section D has 4 long (LA)- type questions of 5 marks each.
6. Section E has 3 source based/case-based questions of 4 marks each

SECTION A — CORRECT OPTIONS ONLY

1-C | 2-A | 3-B | 4-A | 5-A | 6-A | 7-B | 8-C | 9-B | 10-C | 11-B | 12-B | 13-A | 14-C | 15-B | 16-C | 17-B | 18-B | 19-A | 20-A

SECTION B — 2M EACH

Q21. Side = $\sqrt[3]{1728}$ = **12 cm (2M)**

Q22. Rhombus: draw diagonal 5 cm → bisect at O → draw perpendicular through O → mark 2 cm on each side → join vertices **(2M)**
OR: Draw diagonal 5 cm → bisect at O → draw perpendicular bisector → join endpoints **(2M)**

Q23. Digital root of 56 = 5+6 = 11 → **2 (1M)**; next number = **65 (1M)**

Q24. Earth > Moon; difference = $5.97\times10^{24} - 7.35\times10^{22}$ = **5.8965×10^{24} kg (2M)**
OR: $(2^8\times2^5)/2^9 = 2^{8+5-9}$ = **16 (2M)**

Q25. $36\times999 = 36(1000-1) = 36000-36$ = **35964 (2M)**

SECTION C — 3M EACH

Q26. 1816 = 30×60+16 → Mesopotamian **30,16 (1M)**; Chinese = **一千八百一十六 (1M)**; Roman = **MDCCCXVI (1M)**

Q27. LCM(4,9,10)=180 → smallest square divisible by 180 = $2^2\times3^2\times5^2$ = **900 (3M)**
OR: 650000 = **6.5×10^5**; 93000000 = **9.3×10^7**; 0.000045 = **4.5×10^{-5} (1M each)**

Q28. Draw PQ=5 cm **(1M)**; at Q construct ∠PQR=60° and mark QR=4 cm **(1M)**; draw parallels PS∥QR and RS∥PQ to complete **PQRS (1M)**

Q29.
2165 → not divisible by 9 or 11; 2662 → not by 9, **divisible by 11**; 1573 → not by 9, **divisible by 11 (1M each)**
OR: AB×A7=211B → **A=4, B=5 (3M)**

Q30. $(1.5\times10^3)(2.5\times10^{-5}) = 3.75\times10^{-2}$ **(2M)** = **0.0375 (1M)**

Q31. (i) $(3x+5)(5x-2)$ = **$15x^2+19x-10$ (1M)**; (ii) x=2 → **88 m^2 (1M)**; (iii) new width = 5x−2+3 = **5x+1 m (1M)**

SECTION D — 5M EACH

Q32. DCCX = **710 (1M)**; CXV = **115 (1M)**; 710−115=**595 (1M)** → Chinese **五百九十五 (1M)** → Roman **DXCV (1M)**

OR: DCCL=**750 (1M)**; CCXXV=**225 (1M)**; 750−225=**525 (1M)** → Chinese **五百二十五 (1M)** → Roman **DXXV (1M)**

Q33. 1333=31×43 **(1M)**; multiply by $31^2 \times 43^2$ = **1,776,889 (2M)**; product = 1333^3 → cube root = **1333 (1M)**; $1200 = 2^4 \times 3 \times 5^2$ → divide by **3 (1M)**

Q34. (i) UT×3=PUT → **UT=50, PUT=150 (1M)**; (ii) PP×QQ=PRP → valid solutions: **22×11=242, 33×11=363, 44×11=484 (1M)**; (iii) **37×3=111 (1M)**; (iv) **575×5=2875 (2M)**

Q35. $(x+y)^2-(x-y)^2=484-100=384=4xy$ → **xy=96 (2M)**; $x^2+y^2=(484+100)/2$=**292 (2M)**; $(x+y)(x-y)=\sqrt{484}\times\sqrt{100}$=**220 (1M)**

OR: $(a+b)^2=145+2ab=225$ → **ab=40 (2M)**; $(a-b)^2=225-160$=**65 (2M)**; $a^2-b^2=(a+b)(a-b)$=**15√65 (1M)**

SECTION E — 4M EACH

Q36. (a) Opposite side = **24 m (1M)**; (b) adjacent angle = 180°−65°=**115° (1M)**; (c) opposite angle = **65° (1M)**; (d) opposite sides equal; opposite angles equal / adjacent angles supplementary **(1M)**

Q37. (i) 1.2756×10^7 = **12,756,000 m (1M)**; (ii) 1.4×10^9 = **1,400,000,000 m (1M)**; (iii) ratio = $(1.4/1.2756)\times10^2$ = **1.0975×10^2 (1M)**; (iv) ≈ **110 times (1M)**

Q38. (i) Total before discount = **18×12 (1M)**; (ii) 18(12−2)=216−36=**180 (1M)**; (iii) Amount paid = **₹180 (1M)**; (iv) Saving = 18×2 = **₹36 (1M)**

**********ALL THE BEST**********