Past Paper Questions

Class 9 Mathematics · Chapter 2 · Logarithms

Paper	Source
Paper 1	FBISE SSC-I · 2025 · 2nd Exam
Paper 2	FBISE Model Paper · 2025 · Curriculum 2022-23
Paper 3	FBISE SSC-I · 2026 · 1st Exam · Set B (Science Group)
Paper 4	FBISE SSC-I · 2026 · 1st Exam · Set D (Science Group)
Paper 5	FBISE SSC-I · 2026 · 1st Exam · Set M (Science Group)
Paper 6	FBISE Model Paper · 2026 · National Curriculum 2022-23 · Inclusive Scheme of Studies 2024 · 50% MCQs + 50% Descriptive
Paper 7	FBISE SSC-I · 2025 · Annual Paper · Old Curriculum 2006
Paper 8	FBISE SSC-I · 2025 · Annual Paper · Set 1 (Science Group)
Paper 9	FBISE SSC-I · 2025 · Annual Paper · Set 2 (Science Group)

Chapter 2 questions taken from Federal Board SSC-I Mathematics papers, arranged paper by paper. Marks shown in teal brackets. “OR” marks the alternative question in a choice pair. Questions are given without answers. Total: 19 questions.

Paper 1

2025 · 2nd Exam

Section A — MCQ

Q2. 5.67×10^4 in standard form is:

A) 0.000567 **B)** 0.567 **C)** 567000 **D)** 56700

Section B — Short Questions

Q2(iii). Energy magnitude of an earthquake can be calculated by the formula below, where E is the energy released. Calculate the magnitude of the earthquake when $E = 10^4$. Round the answer to the nearest whole number. **[4]**

$$M = {}^{3}\!/_{2} \log_{10} E + 94$$

Paper 2

2025 · Model Paper · Curriculum 2022-23

Section A — MCQ

Q1(ii). Which of the given options represents the scientific notation of 0.25^2?

A) 625×10^{-4} **B)** 62.5×10^{-3} **C)** 6.25×10^{-2} **D)** 0.625×10^{-1}

Section B — Short Questions

Q2(iii). Bani Gala had a population of 10,000 people in the year 2015. The population has been growing exponentially at a rate of 2.5% per year. Using the exponential growth formula below, apply laws of logarithm to determine the year when the population reaches up to 25,000. **[4]**

$$P(t) = P_0 e^{rt}$$

Paper 3

2026 · 1st Exam · Set B · Science Group

Section A — MCQ

Q2. 4500 in scientific notation:

A) 4.5×10^3 **B)** 45×10^3 **C)** 4.5×10^2 **D)** 0.45×10^5

Section B — Short Questions

Q2(ii) OR. An earthquake that occurred in Pakistan in 2005 measured 7.6 on the Richter scale. In 1978, an earthquake in China measured 8.2 on the Richter scale. How many times stronger was the China earthquake than the Pakistan earthquake? (Use the formula below) **[4]**

$$M = \log (I / I_o)$$

Paper 4

2026 · 1st Exam · Set D · Science Group

Section A — MCQ

Q2. Correct scientific notation of 350 =

A) 35×10^2 **B)** 3.5×10^2 **C)** 35×10^3 **D)** 350×10^1

Section B — Short Questions

Q2(iii). An earthquake of 1920 was measured about 8.5 on the Richter scale and another earthquake of 1923 was measured 7.8 on that scale. How many times stronger was the 1920 earthquake than the 1923 earthquake? (Use the formula below) **[4]**

$$M = \log (I / I_o)$$

Paper 5

2026 · 1st Exam · Set M · Science Group

Section A — MCQ

Q2. Scientific notation of 71000 is:

A) 7.1×10^2 **B)** 0.71×10^2 **C)** 7.1×10^3 **D)** 7.1×10^4

Section B — Short Questions

Q2(viii) OR. Starting with 500 users, a startup experiences continuous growth at a rate of 8% per year. To determine the number of years it takes for the company to reach 3000 users, use the formula below, where $N(t)$ is the number of users after time t, N_0 is the initial number of users, r is the growth rate and t is the time in years. **[4]**

$$N(t) = N_0 \times e^{rt}$$

Paper 6

2026 · Model Paper · Inclusive Scheme 2024

Section A — MCQ

Q2. The scientific notation of 150 million kilometres is:

A) 1.5×10^6 **B)** 1.5×10^8 **C)** 1.5×10^{-6} **D)** 1.5×10^{-8}

Section B — Short Questions

Q5 OR. The intensity of sound is measured by the formula below. A machine produces intensity $1000I_0$. Find the value of L. **[3]**

$$L = 10 \log (I / I_0)$$

Paper 7

2025 · Annual Paper · Old Curriculum 2006

Section A — MCQ

Q3. Logarithm of unity to any base is:

A) 1 **B)** 10 **C)** e **D)** 0

Section B — Short Questions

Q2(iii). Find the value of n, when **[4]**

$$\log_4 (64)^{n+1} = \log_5 (625)^{-1}$$

Q2(iii) OR. Find the value of x: **[4]**

$$\log_{81} 27 = x / 8$$

Paper 8

2025 · Annual Paper · Set 1 · Science Group

Section A — MCQ

Q2. The scientific notation of 345.6 is:

A) 3.456×10^{2} **B)** 3.456×10^{3} **C)** 3.456×10^{-2} **D)** 3.456×10^{-3}

Section B — Short Questions

Q2(iii). A radioactive substance decays according to the formula below, where M is mass in grams and t is time in years. **[4]**

$$M = 200 \times 10^{-0.05t}$$

a. Use logarithms to express t in terms of M.
b. Find time t when mass M reduces to 100 grams.

Paper 9

2025 · Annual Paper · Set 2 · Science Group

Section A — MCQ

Q2. The scientific notation of 0.00567 is:

A) 5.67×10^{3} **B)** 5.67×10^{-3} **C)** 5.67×10^{-2} **D)** 5.67×10^{2}

Section B — Short Questions

Q2(iii). The population of a colony is growing according to the formula below, where P is the population and t is the time in years. **[4]**

$$P = 2500 \times e^{0.09t}$$

a. Use logarithms to express t in terms of P.
b. Calculate time t when the population increases to 10,000.