

Logarithm of a Number Greater Than 1

Characteristic, Mantissa & Antilogarithm — Practice Exercises

Use your four-figure logarithm and antilogarithm tables to answer all questions. Show the characteristic and mantissa separately where relevant.

Section A — Finding the Logarithm

1. Find the logarithm of the following numbers:

- a. 436.2
- b. 25.38
- c. 3.258
- d. 812.7
- e. 6.049

Section B — Finding the Antilogarithm

2. Find the value of $10^{0.0148}$.

(Hint: you are to find the antilogarithm.)

- 3. Find the number whose logarithm is 2.6021.
- 4. Find the number whose logarithm is 1.2989.

Section C — Multiplication and Division Using Logarithms

Use logarithm and antilogarithm tables (not a calculator) to evaluate the following. Remember: multiplication becomes addition of logarithms, and division becomes subtraction of logarithms.

- 5. Evaluate $(38.32 \times 2.964) \div (8.637 \times 6.285)$
- 6. Evaluate 27.34×3.652
- 7. Evaluate $542.8 \div 19.75$
- 8. Evaluate $(14.62 \times 8.03) \div 2.916$

Section D — Powers and Roots Using Logarithms (Bonus)

For a power, multiply the logarithm by the index. For a root, divide the logarithm by the index.

- 9. Evaluate 5.234^3
- 10. Evaluate the cube root of 148.3 (i.e. $\sqrt[3]{148.3}$)

Answers

Q1a	2.6397	Q1b	1.4045
Q1c	0.5130	Q1d	2.9099
Q1e	0.7817	Q2	1.035
Q3	400.0	Q4	19.90
Q5	2.093	Q6	99.85
Q7	27.48	Q8	40.26
Q9	143.4	Q10	5.288

Note on Q5: this question combines multiplication and division in one expression — add the logs of the numerators, add the logs of the denominators, then subtract before taking the antilog.