

Finding the Cube of a Two-Digit Number (Alternative Method)

A. Choose the correct answer:

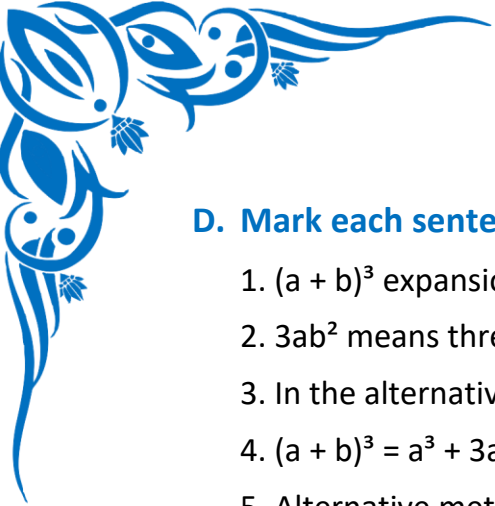
- Which formula is used for finding the cube of a two-digit number in alternative method
 - $(a + b)^2$
 - $(a - b)^3$
 - $(a + b)^3$
 - $(a - b)^2$
- In the alternative method, a and b represent
 - Half of the number
 - Tens place and ones place respectively
 - Hundreds place and tens place
 - None of these
- The cube of 11 using the alternative method is
 - 121
 - 331
 - 1331
 - 1111
- In the expansion $(a + b)^3$, the second term is
 - a^3
 - $3a^2b$
 - $3ab^2$
 - b^3
- In the formula $(a + b)^3$, how many terms are there
 - 2
 - 3
 - 4
 - 5

B. Write the Missing Terms to Complete the Sentences:

- $(a + b)^3 = a^3 + \underline{\hspace{2cm}} + 3ab^2 + b^3$.
- In finding cube using alternative method, b stands for _____ digit of the number.
- The term $3a^2b$ is obtained by squaring _____ and multiplying by b.
- The cube of 10 using alternative method is _____.
- The term b^3 means cube of _____.

C. Figure out the answers to these questions:

- Find the cube of 13 using the alternative method.
- Find the cube of 21 by applying $(a + b)^3$ formula.
- Find the cube of 32 using the expansion formula.
- Find the cube of 45 using alternative method step-by-step.
- Explain why the alternative method is easier for calculating cubes of two-digit numbers.



D. Mark each sentence with a True (✓) or False (X):

1. $(a + b)^3$ expansion has four terms. _____
2. $3ab^2$ means three times a times b squared. _____
3. In the alternative method, b is always greater than a. _____
4. $(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$. _____
5. Alternative method can be used only for perfect squares. _____

E. Challenge yourself with these questions:

1. Find the cube of 14 using alternative method.
2. Expand and simplify $(20 + 3)^3$.
3. Find $(30 + 2)^3$ using $(a + b)^3$ formula.
4. Write the general form of $(a + b)^3$ expansion.
5. Find the cube of 41 using the alternative method.