Introduction of Exponents (Powers)

Α.	Choose the correct answer:	
	1. What is the value of 3 ² ?	
	a) 6	b) 9
	c) 8	d) 12
	2. Which of the following is equal to 2 ⁴ ?	
	a) 6	b) 8
	c) 16	d) 10
	3. What is the base in the expression 5 ³ ?	
	a) 3	b) 5
	c) 15	d) 8
	4. 10 [°] is equal to	
	a) 0	b) 1
	c) 10	d) None of these
	5. Which of the following is the expanded form of 4 ³ ?	
	a) 4 + 4 + 4	b) 4 × 3
	c) 4 × 4 × 4	d) 3 × 4
Β.	Write the Missing Terms to Complete the Sentences:	
	1. The expression 2 ⁵ means multiplying 2 by itself times.	
	2. The value of 1 ⁴ is	
	3. Any non-zero number raised to the power of 0 is	
	4. The exponent in 7 ² is	
	5. The expression $3 \times 3 \times 3$ can be written as	
C.	Mark each sentence with a True (🖍) or False (X):	
	1. The value of 4 ^o is 0	
	2. $2^2 \times 2^3 = 2^5$	

- 3. 10¹ = 0
- 4. 3³ = 27

5. 1⁵ = 5

D. Figure out the answers to these questions:

- 1. Write the value of 6² and explain what each part of the exponent expression represents.
- 2. Express $5 \times 5 \times 5 \times 5$ in exponential form and find its value.
- 3. Compare and state which is greater: 2^3 or 3^2
- 4. Write any three examples of exponent expressions and convert them into expanded form.
- 5. A scientist notes the size of a cell as 10^{-6} meters. What does this mean in decimal form?

E. Challenge yourself with these questions:

- 1. Express 8 × 8 × 8 × 8 × 8 using exponents.
- 2. Find the value of $7^2 + 2^3$
- 3. If a = 2 and b = 3, find the value of $a^3 \times b^2$
- 4. Convert $\frac{1}{1000}$ into exponential form using base 10
- 5. What is the smallest value among 3^2 , 4^1 , and 2^3 ?