

Strand: Numbers

Sub strand: Rules of Indices and Problem

Content Learning Outcome

- Discuss numbers in base index form

Lesson Notes

Numbers In base Index Form

$x^4 = x \times x \times x \times x$

Index, Expanded and Number Forms

$5^2 = 5 \times 5 = 25$

5^2 is called Index Form

5×5 is called Expanded Form

25 is called Numerical Form

Examples

1. An expression is given as $2^3 = n$. The index in the expression is
 - A. 2
 - B. 3
 - C. n
 - D. 8

Answer = B.3

2. Write the following in base index form
 - a. $c \times c \times c \times c$
 - b. $4 \times 4 \times 4 + 5 \times 5$

Answers:

- a. c^4
- b. $4^3 + 5^2$

3. Write in expanded form
 - a. x^3
 - b. $2d^2$

Answers:

- a. $x \times x \times x$
- b. $2 \times d \times d$

Activities

1. $f \times f \times f \times g \times g$ in base – index form is
A. $3f + 2g$ B. $5fg$ C. $3fg^2$ D. f^3g^2
2. An expression is given as $3^4 = n$. The index in the expression is
A. 4 B. 3 C. -1 D. -3
3. Write in base index form
 - a. $6 \times y \times y \times y =$ _____
 - b. $2 \times 2 \times 2 =$ _____
 - c. $5 \times 5 \times 5 \times 5 \times 5 \times 5 =$ _____
4. Write in expanded form
 - a. $x^4 =$ _____
 - b. $2d^5 =$ _____
 - c. $3^4 =$ _____
5. Evaluate these powers
 - a. $3^2 =$
 - b. $6^4 =$
 - c. $9^1 =$