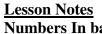
Penang Sangam High School P.O. Box 44, Rakiraki Lesson Notes Year 10 Mathematics

Strand: Numbers

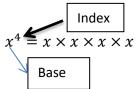
Sub strand: Rules of Indices and Problem

Content Learning Outcome

• Discuss numbers in base index form



Numbers In base Index Form



Index, Expanded and Number Forms

 $\overline{5^2 = 5 \times 5 = 25}$

5² 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. fx fx fx gx 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.
$$x^4 =$$

$$b.2d^5 =$$

5. Evaluate these powers

a.
$$3^2 =$$

b.
$$6^4 =$$

c.
$$9^1 =$$