

NOTATION 2

Our numeration system is based on the decimal system or base 10. You have learnt that the place value of the digits in any numeral in base 10 increases 10 times from right to left, and decreases 10 times from left to right.

So:

Numeral: $24 = (2 \times 10) + (4 \times 1)$

Numeral: $524 = (2 \times 100) + (2 \times 10) + (4 \times 1)$

Separating digits in this manner is called expanded notation.

Consider:

$$28,472 = (2 \times 10,000) + (8 \times 1,000) + (4 \times 100) + (7 \times 10) + (2 \times 1)$$

$$23472 = 20,000 + 8,000 + 400 + 70 + 2$$

Practice:

1. QUESTION

Write the following numerals in expanded notation. Use the comma to separate the every three digits. The first was done for you.

$53\ 101 = (5 \times 10,000) + (3 \times 1,000) + (1 \times 100) + (0 \times 10) + (1 \times 1)$

$5\ 264 =$

$327 =$

$634\ 005 =$

$3\ 204 =$

$12\ 046 =$

$852 =$

$7\ 431 =$

$5\ 002 =$

2. QUESTION

Put in the missing numbers in the box.

$1523 = (1 \times 1,000) + (5 \times 100) + (2 \times 10) + (3 \times 1)$

$800 = (\text{ }) + (0 \times 10) + (0 \times 1)$

$4025 = (4 \times 1,000) + (\text{ }) + (2 \times 10) + (\text{ } \times 1)$

$222 = (2 \times \text{ }) + (2 \times 10) + (\text{ })$

$568 = (\text{ } \times 100) + (\text{ } \times 10) + (8 \times 1)$

$51919 = (5 \times \text{ }) + (1 \times 1,000) + (\text{ }) + (1 \times 10) + (9 \times 1)$

$120254 = (1 \times 100,000) + (2 \times \text{ }) + (\text{ } \times 1,000) + (2 \times 100) + (\text{ } \times 10) + (\text{ } \times 1)$

$$\boxed{} = (8 \times 100) + (9 \times 100) + (3 \times 1)$$

$$59001 = (\boxed{} \times 10,000) + (9 \times \boxed{}) + (0 \times 100) + (\boxed{}) + (1 \times 1)$$

$$\boxed{} = (9 \times 1,000) + (5 \times 100) + (1 \times 10) + (0 \times 1)$$

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