



CLASS NOTES-ANSWERS

EXERCISE 2.3

1. Which of the following will not represent zero:

(a) $1 + 0$ (b) 0×0 (c) $\frac{0}{2}$ (d) $\frac{(10-10)}{2}$

Answer: $1 + 0 = 1$ Hence, it does not represent zero.

2. If the product of two whole numbers is zero, can we say that one or both of them will be zero? Justify through examples.

Answer: Example: $0 \times 0 = 0$, $0 \times 2 = 0$ and $18 \times 0 = 0$

Thus, we see that if the product of two whole numbers is zero then at least one of the numbers should be zero. Also, both the numbers can be zero to give the product zero.

3. If the product of two whole numbers is 1, can we say that one or both of them will be 1? Justify through examples.

Answer: Example: $1 \times 1 = 1$. But, $1 \times 7 = 7$ or $9 \times 1 = 9$

Hence, it's clear that if the product of two whole numbers is 1, both the numbers being multiplied have to be 1

4. Find using distributive property:

(a) 728×101 (b) 5437×1001 (c) 824×25
(d) 4275×125 (e) 504×35

Answer:

(a) 728×101



101 can be written as $100 + 1$

$$= 728 \times (100 + 1)$$

$$= 728 \times 100 + 728 \times 1 \text{ [using distributive property]}$$

$$= 72800 + 728$$

$$= 73528$$

(b) 5437×1001

1001 can be written as $1000 + 1$

$$= 5437 \times (1000 + 1)$$

$$= 5437 \times 1000 + 5437 \times 1 \text{ [using distributive property]}$$

$$= 5437000 + 5437$$

$$= 5442437$$

(c) 824×25

$$= 824 \times (20 + 5)$$

$$= (824 \times 20) + (824 \times 5) \text{ [using distributive property]}$$

$$= 16480 + 4120$$

$$= 20600$$

(d) 4275×125

$$= 4275 \times (100 + 20 + 5)$$

$$= 4275 \times 100 + 4275 \times 20 + 4275 \times 5 \text{ [using distributive property]}$$

$$= 427500 + 85500 + 21375$$



$$= 534375$$

(e) 504×35

$$= (500 + 4) \times 35$$

$$= 500 \times 35 + 4 \times 35 \text{ [using distributive property]}$$

$$= 17500 + 140$$

$$= 17640$$

5. Study the pattern :

$$1 \times 8 + 1 = 9$$

$$1234 \times 8 + 4 = 9876$$

$$12 \times 8 + 2 = 98$$

$$12345 \times 8 + 5 = 98765$$

$$123 \times 8 + 3 = 987$$

Write the next two steps. Can you say how the pattern works?

(Hint: $12345 = 11111 + 1111 + 111 + 11 + 1$).

Answer:

We observe on the left-hand side 1, 12, 123, 1234,... the digits are consecutively increasing. Also, these numbers are being multiplied with 8 in every step. Further, they are being added to consecutive numbers 1, 2, 3, 4...

On the right-hand side the pattern of the numbers are 9, 98, 987, 9876... the digits are consecutively decreasing.

Thus, the next two steps are,

$$123456 \times 8 + 6 = 987654$$

$$1234567 \times 8 + 7 = 9876543$$

