Access NCERT Solutions for Class 6 Chapter 2: Whole Numbers Exercise 2.3

1. Which of the following will not represent zero:

(a) 1 + 0

(b) 0 × 0

(c) 0 / 2

(d) (10 – 10) / 2

Solutions:

(a) 1 + 0 = 1

Hence, it does not represent zero

(b) 0 × 0 = 0

Hence, it represents zero

(c) 0 / 2 = 0

Hence, it represents zero

(d) (10 – 10) / 2 = 0 / 2 = 0

Hence, it represents 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.

Solutions:

If product of two whole numbers is zero, definitely one of them is zero

Example: 0 × 3 = 0 and 15 × 0 = 0

If product of two whole numbers is zero, both of them may be zero

Example: 0 × 0 = 0

Yes, if the product of two whole numbers is zero, then both of them will be 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.

Solutions:

If the product of two whole numbers is 1, both the numbers should be equal to 1

Example: 1 × 1 = 1

But 1 × 5 = 5

Hence, its clear that the product of two whole numbers will be 1, only in situation when both numbers to be multiplied are 1

4. Find using distributive property:

(a) 728 × 101

(b) 5437 × 1001

(c) 824 × 25

(d) 4275 × 125

(e) 504 × 35

Solutions:

(a) Given 728 × 101

= 728 × (100 + 1)

= 728 × 100 + 728 × 1

= 72800 + 728

= 73528

(b) Given 5437 × 1001

= 5437 × (1000 + 1)

= 5437 × 1000 + 5437 × 1

= 5437000 + 5437

= 5442437

(c) Given 824 × 25

= (800 + 24) × 25

= (800 + 25 – 1) × 25

= 800 × 25 + 25 × 25 – 1 × 25

= 20000 + 625 – 25

= 20000 + 600

= 20600

(d) Given 4275 × 125

= (4000 + 200 + 100 – 25) × 125

= (4000 × 125 + 200 × 125 + 100 × 125 – 25 × 125)

= 500000 + 25000 + 12500 – 3125

= 534375

(e) Given 504 × 35

= (500 + 4) × 35

= 500 × 35 + 4 × 35

= 17500 + 140

= 17640

5. Study the pattern:

1 × 8 + 1 = 9 1234 × 8 + 4 = 9876

12 × 8 + 2 = 98 12345 × 8 + 5 = 98765

123 × 8 + 3 = 987

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

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

Solutions:

123456 × 8 + 6 = 987654

1234567 × 8 + 7 = 9876543

Given 123456 = (111111 + 11111 + 1111 + 111 + 11 + 1)

123456 × 8 = (111111 + 11111 + 1111 + 111 + 11 + 1) × 8

= 111111 × 8 + 11111 × 8 + 1111 × 8 + 111 × 8 + 11 × 8 + 1 × 8

= 888888 + 88888 + 8888 + 888 + 88 + 8

= 987648

123456 × 8 + 6 = 987648 + 6

= 987654

Yes, here the pattern works

1234567 × 8 + 7 = 9876543

Given 1234567 = (1111111 + 111111 + 11111 + 1111 + 111 + 11 + 1)

1234567 × 8 = (1111111 + 111111 + 11111 + 1111 + 111 + 11 + 1) × 8

= 1111111 × 8 + 111111 × 8 + 11111 × 8 + 1111 × 8 + 111 × 8 + 11 × 8 + 1 × 8

= 8888888 + 888888 + 88888 + 8888 + 888 + 88 + 8

= 9876536

1234567 × 8 + 7 = 9876536 + 7

= 9876543

Yes, here the pattern works