Exercise 2.2

Q1. Find the sum by suitable rearrangement:

(a) 837 + 208 + 363

(b) 1962 + 453 + 1538 + 647

Ans:

(a) 837 + 208 + 363

= (837 + 363) + 208

= 1200 + 208

= 1408

(b) 1962 + 453 + 1538 + 647

= (1962 + 1538) + (453 + 647)

= 3500 + 1100

= 4600

Q2. Find the product by suitable arrangement:

(a) 2 x 1768 x 50

(b) 4 x 166 x 25

(c) 8 x 291 x 125

(d) 625 x 279 x 16

(e) 285 x 5 x 60

(f) 125 x 40 x 8 x 25

Ans:

(a) 2 x 1768 x 50

= (2 x 50) x 1768

= 100 x 1768

= 176800

(b) 4 x 166 x 25

= (4 x 25) x 166

= 100 x 166

= 16600

(c) 8 x 291 x 125

= (8 x 125) x 291

= 1000 x 291

= 291000

(d) 625 x 279 x 16

= (625 x 16) x 279

= 10000 x 279

= 2790000

(e) 285 x 5 x 60

= 284 x (5 x 60)

= 284 x 300

= 85500

(f) 125 x 40 x 8 x 25

= (125 x 8) x (40 x 25)

= 1000 x 1000

= 1000000

Q3. Find the value of the following:

(a) 297 x 17 + 297 x 3

(b) 54279 x 92 + 8 x 54279

(c) 81265 x 169 – 81265 x 69

(d) 3845 x 5 x 782 + 769 x 25 x 218

Ans:

(a) 297 x 17 + 297 x 3

= 297 x (17 + 3)

= 297 x 20

= 5940

(b) 54279 x 92 + 8 x 542379

= 54279 x (92 + 8)

= 54279 x 100

= 5427900

(c) 81265 x 169 – 81265 x 69

= 81265 x (169 – 69)

= 81265 x 100

= 8126500

(d) 3845 x 5 x 782 + 769 x 25 x 218

= 3845 x 5 x 782 + 769 x 5 x 5 x 218)

= 3845 x 5 x 782 + 3845 x 5 x 218

= 3845 x 5 x (782 + 218)

= 3845 x 5 x 1000

= 19225000

Q4. Find the product using suitable properties:

(a) 738 x 103

(b) 854 x 102

(c) 258 x 1008

(d) 1005 x 168

Ans:

(a) 738 x 103

= 738 x (100 + 3)

= 738 x 100 + 738 x 3

= 73800 + 2214

= 76014

(b) 854 x 102

= 854 x (100 + 2)

= 854 x 100 + 854 x 2

= 85400 + 1708

= 87108

(c) 258 x 1008

= 258 x (1000 + 8)

= 258 x 1000 + 258 x 8

= 258000 + 2064

= 260064

(d) 1005 x 168

= (1000 + 5) x 168

= 1000 x 168 + 5 x 168

= 168000 + 840

= 168840

Q5. A taxi-driver, filled his car petrol tank with 40 liters of petrol on Monday. The next day, he filled the tank with 50 liters of petrol. If the petrol costs ` 44 per liter, how much did he spend in all on petrol?

Ans:

Petrol filled on Monday = 40 liters

Petrol filled on next day = 50 liters

Total petrol filled = 90 liters

Now, Cost of 1 liter petrol = ` 44

Cost of 90 liters petrol = 44 x 90

= 44 x (100 – 10)

= 44 x 100 – 44 x 10

= 4400 – 440

= ` 3960

Therefore, he spent ` 3960 on petrol.

Q6. A vendor supplies 32 liters of milk to a hotel in a morning and 68 liters of milk in the evening. If the milk costs ` 15 per liter, how much money is due to the vendor per day?

Ans:

Supply of milk in morning = 32 liters

Supply of milk in evening = 68 liters

Total supply = 32 + 68 = 100 liters

Now Cost of 1 liter milk = ` 15

Cost of 100 liters milk = 15 x 100 = ` 1500

Therefore, ` 1500 is due to the vendor per day.

Q7. Match the following:

(i)425 x 136 = 425 x (6 + 30 + 100) (a) Commutativity under multiplication

(ii) 2 x 48 x 50 = 2 x 50 x 49 (b) Commutativity under addition

(iii) 80 + 2005 + 20 = 80 + 20 + 2005 (c) Distributivity multiplication under addition

Ans:

(i) 425 x 136 = 425 x (6 + 30 + 100) (c) Distributivity of multiplication over addition

(ii) 2 x 49 x 50 = 2 x 50 x 49 (a) Commutivity under multiplication

(iii) 80 + 2005 + 20 = 80 + 20 + 2005 (b) Commutivity under addition

********** END **********