

CHAPTER – 2
WHOLE NUMBERS
EXERCISE – 2.2

Q. 1 Find the sum by suitable rearrangement:

(a) $837 + 208 + 363$

(b) $1962 + 453 + 1538 + 647$

Answer:

a. Arrange the numbers in the decreasing order;

$$837 + 363 + 208$$

Now make pairs,

$$= (837 + 363) + 208$$

$$= 1200 + 208$$

$$= 1408$$

b. Arrange the numbers in decreasing order,

$$= 1962 + 1538 + 647 + 453$$

Now make pairs,

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

$$= 3500 + 1100$$

$$= 4600$$

Q. 2 Find the product by suitable rearrangement:

(a) $2 \times 1768 \times 50$ (b) $4 \times 166 \times 25$

(c) $8 \times 291 \times 125$ (d) $625 \times 279 \times 16$

(e) $285 \times 5 \times 60$ (f) $125 \times 40 \times 8 \times 25$

Answer:

a. $2 \times 1768 \times 50$

Arrange it in increasing order,

$$= 2 \times 50 \times 1768$$

$$= 100 \times 1768$$

$$= 176800$$

b. $4 \times 166 \times 25$

Arrange it in increasing form,

$$= 4 \times 25 \times 166$$

$$= 100 \times 166$$

$$= 16600$$

c. $8 \times 291 \times 125$

$$= 8 \times 125 \times 291$$

$$= 1000 \times 291$$

$$= 291000$$

d. $625 \times 279 \times 16$

$$= 625 \times 16 \times 279$$

$$= 10000 \times 279$$

$$= 2790000$$

e. $285 \times 5 \times 60$

$$= 285 \times 300$$

$$= 85500$$

f. $125 \times 40 \times 8 \times 25$

$$= 125 \times 8 \times 40 \times 25$$

$$= 1000 \times 1000$$

$$= 1000000$$

Q. 3 Find the value of the following:

(a) $297 \times 17 + 297 \times 3$

(b) $54279 \times 92 + 8 \times 54279$

(c) $81265 \times 169 - 81265 \times 69$

(d) $3845 \times 5 \times 782 + 769 \times 25 \times 218$

Answer:

a. $297 \times 17 + 297 \times 3$

As we can clearly see it is in the form of;

$$= ab + ac$$

$$= a(b + c)$$

So,

$$= 297 \times (17 + 3)$$

$$= 297 + 20$$

$$= 5940$$

b. $54279 \times 92 + 8 \times 54279$

$$= 54279 \times (92 + 8)$$

$$= 54279 \times 100$$

$$= 5427900$$

c. $81265 \times 169 - 81265 \times 69$

$$= 81265 \times (169 - 69)$$

$$= 81265 \times 100$$

$$= 8126500$$

d. $3845 \times 5 \times 782 + 769 \times 25 \times 218$

$$= 3845 \times 5 \times 782 + 769 \times 5 \times 5 \times 218$$

$$= 3845 \times 5 \times 782 + 3845 \times 5 \times 218$$

$$= 3845 \times 5 \times (782 + 218)$$

$$= 19225 \times 1000$$

$$= 19225000$$

Q. 4 Find the product using suitable properties.

(a) 738×103

(b) 854×102

(c) 258×1008

(d) 1005×168

Answer:

a. 738×103

By using distributive property;

We get,

$$= 738(100 + 3)$$

$$= 738 \times 100 + 738 \times 3$$

$$= 73800 + 2214$$

$$= 76014$$

b. 854×102

By using distributive property, we get,

$$= 854 \times (100 + 2)$$

$$= 854 \times 100 + 854 \times 2$$

$$= 85400 + 1708$$

$$= 87108$$

c. 258×1008

By using distributive property, we get,

$$= 258 \times (1000 + 8)$$

$$= 258 \times 1000 + 258 \times 8$$

$$= 258000 + 2064$$

$$= 260064$$

d. 1005×168

By using distributive property, we get,

$$= (1000 + 5) \times 168$$

$$= 1000 \times 168 + 5 \times 168$$

$$= 168000 + 840 = 168840$$

Q. 5 A taxi driver filled his car petrol tank with 40 litres of petrol on Monday. The next day, he filled the tank with 50 litres of petrol. If the petrol costs Rs. 44 per litre, how much did he spend in all on petrol?

Answer:

Petrol filled on Monday = 40 litres

Petrol filled on Tuesday = 50 litres

Total petrol filled = $(40+50)$ litres

Cost of petrol = 44 Rs per litre

Total money spent on petrol = $44 \times (40 + 50)$

$$= 44 \times 40 + 44 \times 50$$

$$= 1760 + 2200$$

= 3960 Rs.

Q. 6 A vendor supplies 32 litres of milk to a hotel in the morning and 68 litres of milk in the evening. If the milk costs Rs. 45 per litre, how much money is due to the vendor per day?

Answer:

Milk supplied in the morning = 32 L

Milk supplied in the evening = 68 L

Total milk supplied every day = $(32 + 68)$ L

Cost of milk = 45 Rs

Total cost per day = $45 \times (32+68)$

$= 45 \times 100 = 4500$ Rs

Thus, Rs 4500 is due to the vendor every day

Q. 7 Match the following:

(i) $425 \times 136 = 425 \times (6+ 30 +100)$	(a) Commutativity of multiplication
(ii) $2 \times 49 \times 50 = 2 \times 50 \times 49$	(b) Commutativity of addition
(iii) $80 + 2005 + 20 = 80 + 20 + 2005$	(c) Distributivity of multiplication over addition

Answer:

(i) $425 \times 136 = 425 \times (6+ 30 +100)$	(a) Distributivity of multiplication over addition	Explanation: 136 can be written as $6 + 30 + 100$
(ii) $2 \times 49 \times 50 = 2 \times 50 \times 49$	(b) Commutativity of multiplication	Explanation: It means that the operands can be written regardless of the order
(iii) $80 + 2005 + 20 = 80 + 20 + 2005$	(c) Commutativity of addition	Explanation: It means that the operands can be written regardless of the order