

RD SHARMA

Solutions

Class 6 Maths

Chapter 4

Ex 4.1

1. Fill in the blanks to make each of the following a true statement:

Solution: (i) $359 + 476 = 476 + 359$ (Commutativity)

(ii) $2008 + 1952 = 1952 + 2008$ (Commutativity)

(iii) $90758 + 0 = 90758$ (Additive identity)

(iv) $54321 + (489 + 699) = 489 + (54321 + 699)$ (Associativity)

2. Add each of the following and check by reversing the order of addends:

Solution: (i) $5628 + 39784 = 45412$

And,

$39784 + 5628 = 45412$

(ii) $923584 + 178 = 923762$

And,

$178 + 923584 = 923762$

(iii) $15409 + 112 = 15521$

And,

$112 + 15409 = 15521$

(iv) $2359 + 641 = 3000$

And,

$641 + 2359 = 3000$

3. Determine the sum by suitable rearrangements:

Solution: (i) $953 + 407 + 647$

Therefore, $53 + 47 = 100$

Therefore, $(953 + 647) + 407 = 1600 + 407 = 2007$

(ii) $15409 + 178 + 591 + 322$

$409 + 91 = 500$

And,

$78 + 22 = 100$

Therefore, $(15409 + 591) + (178 + 322) = (16000) + (500)$

$= 16500$

(iii) $2359 + 10001 + 2641 + 9999$

Therefore, $59 + 41 = 100$

And, $99 + 01 = 100$

Therefore, $(2359 + 2641) + (10001 + 9999)$

$= (5000) + (20000)$

$= 25000$

(iv) $1 + 2 + 3 + 4 + 1996 + 1997 + 1998 + 1999$

Therefore, $99 + 1 = 100$

$98 + 2 = 100$

$97 + 3 = 100$

And

$96 + 4 = 100$

Therefore, $(1 + 1999) + (2 + 1998) + (3 + 1997) + (4 + 1996)$

$= 2000 + 2000 + 2000 + 2000$

$= 8000$

(v) $10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 + 19 + 20$

$10 + 20 = 30$

$1 + 9 = 10$

$2 + 8 = 10$

$$3 + 7 = 10$$

And,

$$4 + 6 = 10$$

Therefore, $(10 + 20) + (11 + 19) + (12 + 18) + (13 + 17) + (14 + 16)$

$$= 30 + 30 + 30 + 30 + 30 + 15$$

$$= 150 + 15$$

$$= 165$$

4. Which of the following statements are true and which are false?

(i) *The sum of two odd numbers is an odd number.*

(ii) *The sum of two odd numbers is an even number.*

(iii) *The sum of two even numbers is an even number.*

(iv) *The sum of two even numbers is an odd number.*

(v) *The sum of an even number and an odd number is an odd number.*

(vi) *The sum of an odd number and an even number is an even number.*

(vii) *Every whole number is a natural number.*

(viii) *Every natural number is a whole number.*

(ix) *There is a whole number which when added to a whole number, gives that number*

(x) *there is a natural number which when added to a natural number, gives that number.*

(xi) *commutativity and associativity are properties of whole numbers.*

(xii) *commutativity and associativity are properties of addition of whole number.*

Solution: (i) FALSE ($3 + 5 = 8$; 8 is an even number)

(ii) TRUE ($3 + 5 = 8$; 8 is an even number)

(iii) TRUE ($2 + 4 = 6$; 6 is an even number)

(iv) FALSE ($2 + 4 = 6$; 6 is an even number)

(v) TRUE ($2 + 3 = 5$; 5 is an odd number)

(vi) FALSE ($3 + 2 = 5$; 5 is not an even number)

(vii) FALSE [The whole number set is $\{0, 1, 2, 3, 4 \dots\}$, whereas the natural number set is $\{1, 2, 3, 4 \dots\}$]

(viii) TRUE [The whole number set is $\{0, 1, 2, 3, 4 \dots\}$, whereas the natural number set is $\{1, 2, 3, 4 \dots\}$]

(ix) TRUE [That number is zero.]

(x) FALSE

(xi) FALSE

(xii) TRUE