EDUGROSS
WISDOMISING KNOWLEDGE

RS Aggarwal Solutions for Class 6 Maths Chapter 4 - Integers

Exercise 4A   PAGE NO: 63

1.

Solutions

The opposite statements

(i) The opposite statement of an increase of 8 is a decrease of 8

(ii) The opposite statement of a loss of ₹ 7 is a gain of ₹ 7

(iii) The opposite statement of gaining a weight of 5 kg is losing a weight of 5 kg

(iv) The opposite statement of 10 km above sea level is 10 km below sea level

(v) The opposite statement of 5◦C below the freezing point is 5◦C above the freezing point

(vi) The opposite statement of a deposit of ₹ 100 is a withdrawal of ₹ 100

(vii) The opposite statement of earning a ₹ 500 is spending ₹ 500

(viii) The opposite statement of going 6 km to the east is going 6 km to the west

(ix) The opposite of 24 is -24

(x) The opposite of -34 is 34

2.

Solutions

(i) A gain of rupees 600 indicates +₹ 600

(ii) A loss of rupees 800 indicates -₹ 800

(iii) 7◦C below the freezing point indicates -7◦C

(iv) Decrease of 9 indicates -9

(v) 2 Km above sea level indicates +2 km

(vi) 3 km below sea level indicates –3 km

(vii) A deposit of rupees 200 indicates +₹ 200

(viii) A withdrawal of rupees 300 indicates -₹ 300

3.

(i) -5

(ii) -2

(iii) 0

(iv) 7

(v) -13

Solutions

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(i) Here -5 lies on the left side of the 0 on the number line
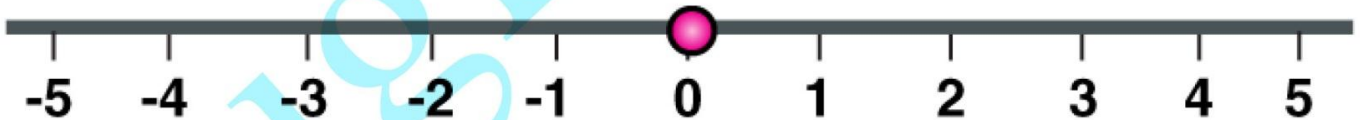
-5 -4 -3 -2 -1 0 1 2 3 4 5

-5 -4 -3 -2 -1 0 1 2 3 4 5

(ii) Here -2 lies on the left side of the 0 on the number line

-5 -4 -3 -2 -1 0 1 2 3 4 5
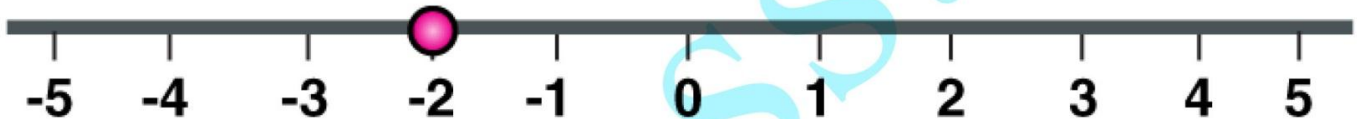
-5 -4 -3 -2 -1 0 1 2 3 4 5

(iii) Here 0 lies in the center on the number line

-5 -4 -3 -2 -1 0 1 2 3 4 5

-5 -4 -3 -2 -1 0 1 2 3 4 5

(iv) Here 7 lies on the right side of the 0 on the number line

-7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7

-2 -1 0 1 2 3 4 5 6 7 8

(v) Here -13 lies on the left side of the 0 on the number line

-13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5

4.

Solutions

(i) Since 0 is greater than every negative integer

Hence 0 is greater than -2

(ii) Since 3 is less than 5

Hence -3 is greater than -5

(iii) Since every positive integer is greater than negative integer

Hence 2 is greater than -5

(iv) Since every positive integer is greater than negative integer

Hence 8 is greater than -16

(v) Since 365 is less than 913

Hence -365 is greater than -913

(vi) Since every positive integer is greater than negative integer

Hence 8 is greater than -888

5.

Solutions

(i) -7 is less than 6

(ii) -1 is less than 0

(iii) -27 is less than -13

(iv) -26 is less than 17

(v) -603 is less than -317

(vi) -777 is less than 7

6.

Solutions

(i) 1, 2, 3, 4 and 5 are the integers between 0 and 6

(ii) -4, -3, -2, -1 are the integers between -5 and 0

(iii) -2, -1, 0, 1, and 2 are the integers between -3 and 3

(iv) -6 is the integer between -7 and -5

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Exercise 4B

1.

Solutions

(i) 9 + (-6) = 3

-4 -3 -2 -1 0 1 2 3 4

Hence, 3 lie on the right side of 0 on the number line

(ii) (-3) + 7 = 4

-4 -3 -2 -1 0 1 2 3 4

Hence, 4 lie on the right side of 0 on the number line

(iii) 8 + (-8) = 0

-4 -3 -2 -1 0 1 2 3 4

Hence 0 lies in the center on the number line

(iv) (-1) + (-3) = -4

-4 -3 -2 -1 0 1 2 3 4

Hence, -4 lie on left side of 0 on the number line

(v) (-4) + (-7) = -11

-11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4

Hence, -11 lie on the left side of 0 on the number line

(vi) (-2) + (-8) = -10

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5

Hence, -10 lie on the left side of 0 on the number line

(vii) 3 + (-2) + (-4) = -3

-4 -3 -2 -1 0 1 2 3 4

Hence, -3 lie on the left side of 0 on the number line

(viii) (-1) + (-2) + (-3) = -6

-7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7

Hence, -6 lie on the left side of 0 on the number line

(ix) 5 + (-2) + (-6) = -3

-5 -4 -3 -2 -1 0 1 2 3 4 5

Hence, -3 lie on the left side of 0 on the number line

2.

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Solutions

(i) (-3) + (-9) = -12

(ii) (-7) + (-8) = -15

(iii) (-9) + 16 = 7

(iv) (-13) + 25 = 12

(v) 8 + (-17) = -9

(vi) 2 + (-12) = -10

3.

Solutions

(i)   -365
       - 87
   | - 452 |

(ii)   − 73
       - 687
   | - 760 |

(iii) − 1065
       - 987
   | - 2052 |

(iv) -3569
     -1089
   | -4685 |

4.

Solutions

(i) $- 206$
$+\ \ 98$
$-\ 108$

(ii) $+178$
$-\ 69$
109

(iii) $-\ 103$
$+\ 312$
209

(iv) -493
$+289$
$-\ 204$

5.

Solutions

(i) 137 + (-354) = -217

-217 is the sum of 137 and -354

(ii) 1001 + (-13) = 988

988 is the sum of 1001 and -13

(iii) -3057 + 199 = -2858

-2858 is the sum of -3057 and 199

(iv) -36 + 1027 = 991

991 is the sum of -36 and 1027

(v) -389 + (-1032) = -1421

-1421 is the sum of -389 and -1032

(vi) -36 + 100 = 64

64 is the sum of -36 and 100

(vii) 3002 + (-888) = 2114

2114 is the sum of 3002 and -888

(viii) -18 + 25 + (-37) = -30

-30 is the sum of -18, +25 and -37

(ix) -312 + 39 + 192 = -81

-81 is the sum of -312, 39 and 192

(x) 36 + (-51) + (-203) + (-28)

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36 + (-51 – 203 – 28)

36 + (- 282)

36 – 282 = -246

-246 is the sum of -51, -203, 36 and -28

6.

Solutions

(i) -57 + 57 = 0

Hence, the additive inverse of -57 is 57

(ii) 183 – 183 = 0

Hence, the additive inverse of 183 is -183

(iii) 0 = 0

The additive inverse of 0 is 0

(iv) -1001 + 1001 = 0

Hence, the additive inverse of -1001 is 1001

(v) 2054 – 2054 = 0

Hence, the additive inverse of 2054 is -2054

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Exercise 4C

1.

Solutions

(i) -34 -18 = -52

(ii) 25 – (-15) = 25 + 15 = 40

(iii) -43 – (-28) = -43 + 28 = -15

(iv) -37 – 68 = -105

(v) 0- 219 = -219

(vi) 0 – (-92) = 92

(vii) -250 – (-135) = -250 + 135 = -115

(viii) -287 – (-2768) = -287 + 2768 = 2481

(ix) -271 – (6240) = – 6511

(x) 6250 – (-3012) = 6250 + 3012 = 9262

2.

Solutions

Finding the sum of -1050 and 813

-1050 + 813 = – 237

Subtracting the sum of – 1050 and 813 i.e -237 from -23

We get

-23 – (-237) = – 23 + 237

= 214

3.

Solution

To find the sum of -250 and 138

-250 + 138 = -112

To find the sum of 136 and -272

136 + (-272) = 136 -272

= -136

Subtracting the sum of -250 and 138 from sum of 136 and -272

-136 – (-112) = -136 +112

= -24

4.

Solution

Finding the sum of 33 and -47

33 + (-47) = 33 – 47

= -14

Subtracting -84 from -14

-14 – (-84) = -14 + 84

= 70

5.

Solution

Finding the difference of -8 and -68

-8 – (-68) = – 8 + 68

= 60

Now add -36 to 60

-36 + 60 = 24

6.

Solutions

(i) [37 – (-8)] + [11 – (-30)] = (37 + 8) + (11 + 30)

= 45 + 41

= 86

(ii) [-13 – (-17)] + [-22 – (-40)] = (-13 + 17) + (-22 + 40)

=4 + 18

= 22

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Exercise 4D   PAGE NO: 72

1.

Solutions

(i) Multiplying 15 by 9

15 × 9 = 135

(ii) Multiplying 18 by -7

18 × (-7) = – 126

(iii) Multiplying 29 by -11

29 × (-11) = -319

(iv) Multiplying -18 by 13

-18 × 13 = -234

(v) Multiplying -56 by 16

-56 × 16 = -896

(vi) Multiplying 32 by -21

32 × (-21) = -672

(vii)Multiplying -57 by 0

-57 × 0 = 0

(viii) Multiplying 0 by -31

0 × (-31) = 0

(ix) Multiplying -12 by -9

(-12) × (-9) = 108

(x) Multiplying -746 by -8

-746 × (-8) = 5968

(xi) Multiplying 118 by -7

118 × (-7) = -826

(xii) Multiplying by -238 by -143

-238 × (-143) = 34034

2.

Solutions

(i) (-2) × 3 × (-4) = [(-2) × 3] × (-4)

= (-6) × (-4)

= 24

(ii) 2 × (-5) × (-6) = [2 × (-5)] × (-6)

= (-10) × (-6)

= 60

(iii) (-8) × 3 × 5 = [-8 × 3] × 5

= (-24) × 5

= -120

(iv) 8 × 7 × (-10) = [8 × 7] × (-10)

= 56 × (-10)

= -560

(v) (-3) × (-7) × (-6) = [(-3) × (-7)] × (-6)

= 21 × (-6)

= -126

(vi) (-8) × (-3) × (-9) = [(-8) × (-3)] × (-9)

= 24 × (-9)

= − 216

3.

Solutions

(i) 18 × (-27) × 30 = (-27) × [18 × 30]

= (-27) × 540

= -14580

(ii) (-8) × (-63) × 9 = [(-8) × (-63)] × 9

= 504 × 9

= 4536

(iii) (-17) × (-23) × 41= [(-17) × (-23)] × 41

= 391× 41

= 16031

(iv) (-51) × (-47) × (-19) = [(-51) × (-47)] × (-19)

= 2397 × (-19)

= -45543

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Exercise 4E   PAGE NO: 75

1.

Solutions

(i) 85 ÷ (-17) = 85/-17 = -5

(ii) -72 ÷ 18 = -72/18 = -4

(iii) -80 ÷ 16 = -80/16 = -5

(iv) -121 ÷ 11 = -121/11 = -11

(v) 108 ÷ (-12) = 108 /-12 = -9

(vi) -161 ÷ 23 = -161/23 = -7

(vii) -76 ÷ (-19) = -76/ -19 = 4

(viii) -147 ÷ (-21) = -147 /-21 = 7

(ix) -639 ÷ (-71) = -639/-71 = 9

(x) -15625 ÷ (-125) = -15625/-125 = 125

(xi) 2067 ÷ (-1) = 2067/ -1 = -2067

(xii) 1765 ÷ (-1765) = 1765/ -1765 = – 1 × 1765/1765

= -1 × 1

= -1

(xiii) 0 ÷ (-278) = 0/-278 = 0

(xiv) 3000 ÷ (-100) = 3000/-100 = -30

2.

Solutions

(i) 80 ÷ (-16) = -5

(ii) (-84) ÷ (12) = -7

(iii) (-125) ÷ (-5) = 25

(iv) (0) ÷ 372 = 0

(v) (-186) ÷ 1 = -186

(vi) (-34) ÷ 17 = -2

(vii) (-165) ÷ 165 = -1

(viii) (-73) ÷ (-1) =73

(ix) 1 ÷ (-1) = -1

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Exercise 4F   PAGE NO: 75

OBJECTIVE QUESTIONS

1.

Solution

Since 4 is greater than 3

Hence -4 is less than -3

∴ -4 < -3

Option (b) is the correct answer

2.

Solution

2 less than -3 indicates

-3-2 = -5

∴ 2 less than -3 is -5

Option (c) is the correct answer

3.

Solution

4 more than -5 indicates

-5 + 4 = -1

∴ 4 more than -5 is -1

Option (c) is the correct answer

4.

(d) None of these

Solution

2 lessthan -7 indicates

-7 -2 = -9

∴ 2 less than -7 is -9

Option (a) is the correct answer

5.

Solution

Since the absolute value of -3 is 3

7 + 3 = 10

Option (b) is the correct answer

6.

Solution

(-42) + (-35) = -42 – 35

= -77

Option (c) is the correct answer

7.

Solution

(-37) + 6 = -37 + 6

= -31

Option (b) is the correct answer

8.

Solution

(49) + (-27) = 49 – 27

= 22

Option (c) is the correct answer

9.

Solution

Since in succession we move from left to the right of the number line

Hence, -17 is the successor of -18

Option (c) is the correct answer

10.

Solution

To find the predecessor of a number we move from right to the left of the number line

Hence, -17 is the predecessor of -16

Option (b) is the correct answer

11.

Solution

If we add the additive inverse of a given number to a number we get 0

Hence -5 + 5 = 0

∴ The additive inverse of -5 is 5

Option (a) is the correct answer

12.

Solution

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-12 – (-5) = -12 + 5

= – 7

∴ -12 – (-5) = -7

Option (b) is the correct answer

13.

Solution

5 – (-8) = 5 + 8

= 13

Option (b) is the correct answer