Exercise 6.1

1. Write opposite of the following:

(a) Increase in weight
Ans: Decrease in weight

(b) 30 km north
Ans: 30 km south

(c) 326 BC
Ans: 326 AD

(d) Loss of ₹ 700
Ans: Profit of ₹700

(e) 100 m above sea level
Ans: 100 m below sea level

2. Represent the following numbers as integers with appropriate signs.

(a) An aero plane is flying at a height two thousand meters above the ground.
Ans: (+) 2000 meters

(b) A submarine is moving at a depth eight thousand meters below the sea level.
Ans: (-) 8000 meters
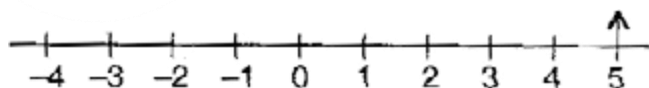
(c) A deposit of rupees two hundred.
Ans: (+) 200 Rupees

(d) Withdrawal of rupees seven hundred.
Ans: (-) 700 Rupees
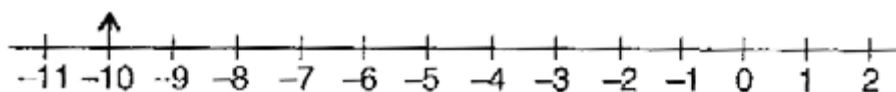
3. Represent the following numbers on number line:

(a) +5
Ans:

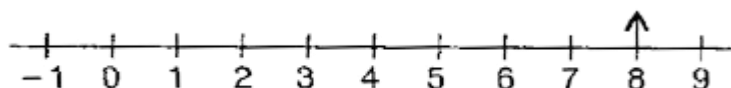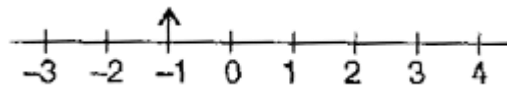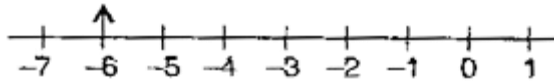

(b) −10
Ans:

(c) +8
Ans:

(d) –1
Ans:

(e) –6

Ans:

4. Adjacent figure is a vertical number line, representing integers. Observe it and locate the following points:

(a) If point D is +8 then which point is –8?
Ans: F

(b)Is point G a negative integer or a positive integer?
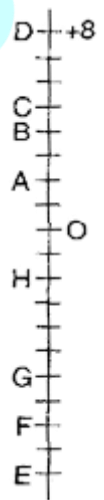Ans: Negative

(c) Write integers for points B and E.
Ans: B = (+)4; E = (-)10

(d) Which point marked on this number line has the least value?
Ans: E

(e) Arrange all the points in decreasing order of values.
Ans: D, C, B, A, O, H, G, F, E

5. Following is the list of temperatures of five places in India, on a particular day of the year.

(a) Write the temperature of these places in the form of integers in the blank column.

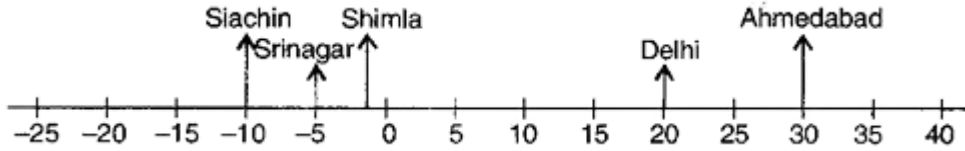| Place	Temperature	
Siachin	10°C below 0°C	(-) 10°C
Shimla	2°C below 0°C	(-) 2°C
Ahmedabad	30°C above 0°C	(+) 30°C
Delhi	20°C above 0°C	(+) 20°C
Srinagar	5°C below0°C	(-) 5°C

(b) Following is the number line representing the temperature in degree Celsius.
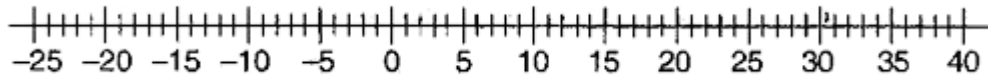
Plot the name of the city against its temperature.

Ans:

(c) Which is the coolest place?

Ans: Siachin

(d) Write the names of the place where temperature are above 10°C

Ans: Ahmedabad, Delhi

6. In each of the following pairs, which number is to the right of the other on the number line?

(a) 2, 9

Ans: 9 is right to 2

(b) −3, −8

Ans: −3 is right to −8

(c) 0, −1

Ans: 0 is right to -1

(d) −11, 10

Ans: 10 is right to −11

(e) −6, 6

Ans: 6 is right to −6

(f) 1, −100

Ans: 1 is right to −100

7. Write all the integers between the given pairs (write them in the increasing order):

(a) 0 and –7

Ans: –6, –5, –4, –3, –2, –1

(b) –4 and 4

Ans: –3, –2, –1, 0, 1, 2, 3

(c) –8 and –15

Ans: –14, –13, –12, –11, –10, –9

(d) –30 and –23

Ans: –29, –28, –27, –26, –25, –24

8.

(a) Write four negative integers greater than –20.

Ans: –19, –18, –17, –16

(b) Write four negative integers less than –10.

Ans: –11, –12, –13, –14

9. For the following statements write True (T) or False (F). If the statement is false, correct the statement:

(a) –8 is to the right of –10 on a number line.

Ans: True

(b) –100 is the right of –50 on a number line.

Ans: False

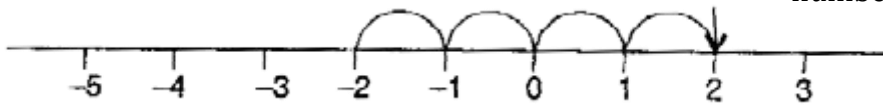(c) Smallest negative integer is –1.

Ans: False

(d) –26 is larger than –25.

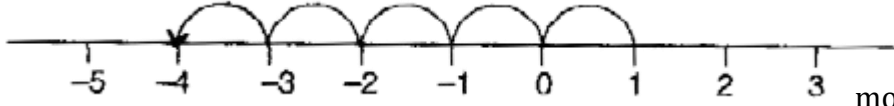**Ans**: False

10. Draw a number line and answer the following:

(a) Draw a   number line will we reach
if we move 4   numbers to the
right of –2.

Ans:

(b) Which   number will we
reach if we   move 5 numbers to the
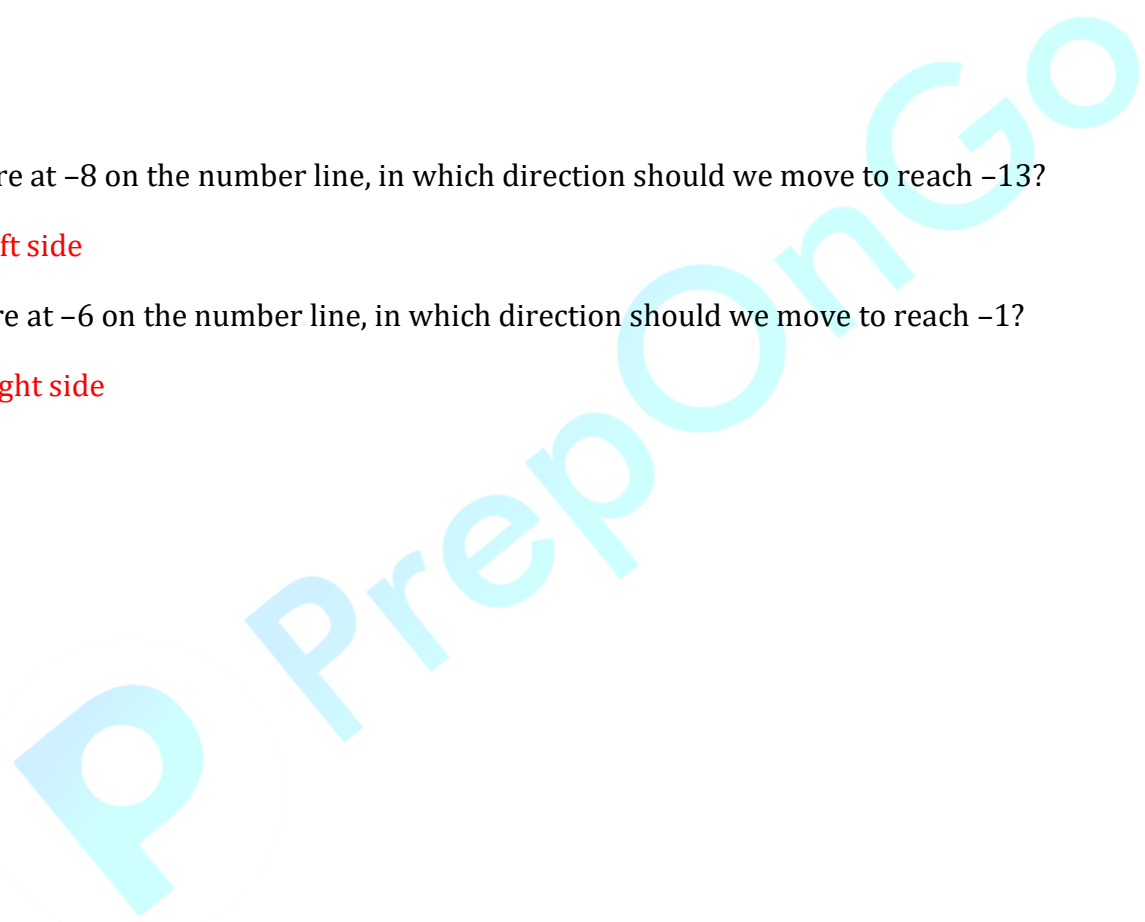left of 1.

Ans:

(c) If we are at –8 on the number line, in which direction should we move to reach –13?

Ans: On left side

(d)If we are at –6 on the number line, in which direction should we move to reach –1?
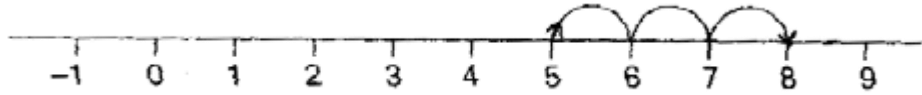
Ans: On right side

Exercise 6.2

1. Using the number line write the integer which is:
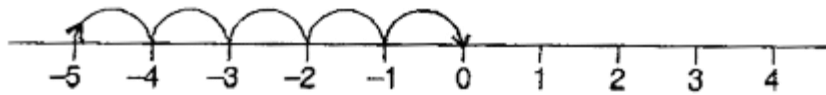
(a) 3 more than 5

Ans: 8

(b) 5 more than −5

Ans: 0

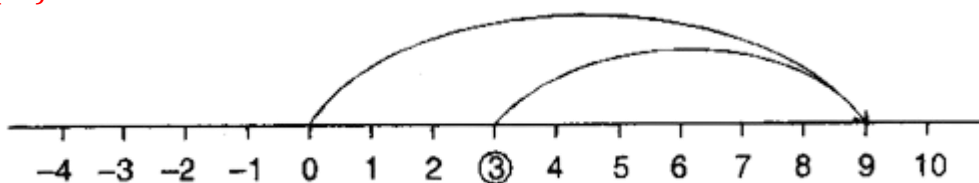(c) 6 less than 2

Ans: −4

(d) 3 less than −2

Ans: −5
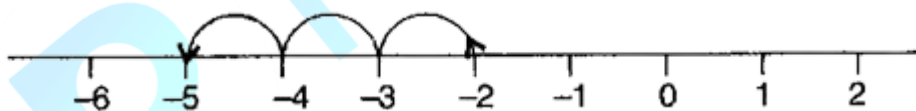
2. Use number line and add the following integers:

(a) 9 + (−6)

Ans: 9 + (−6) = 3

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(b) 5 + (–11)

Ans: 5 + (–11) = –6
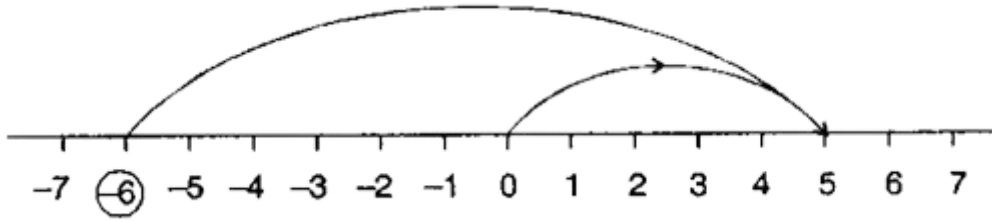
(c) (–1) + (–7)

Ans: (–1) + (–7) = –8
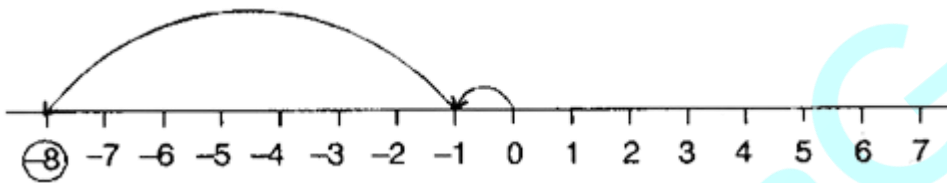
(d) (–5) + 10

Ans: (–5) + 10 = 5
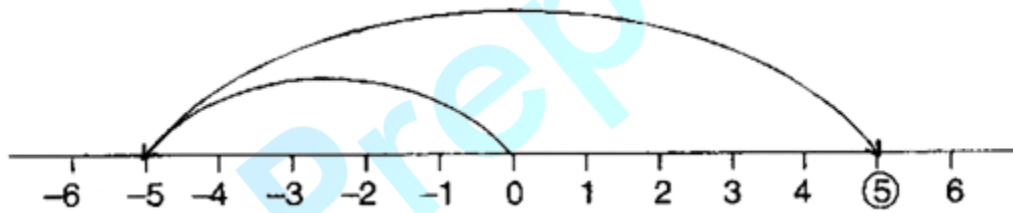
(e) (–1) + (–2) + (–3)

Ans: (–1) + (–2) + (–3) = –6

(f) (–2) + 8 + (–4)

Ans: (–2) + 8 + (–4) = 2

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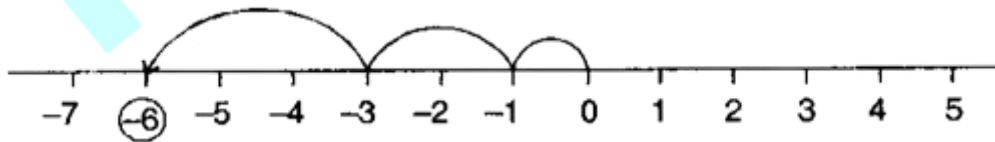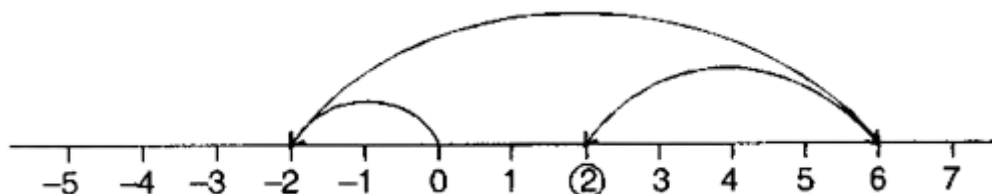
3. Add without using number line:

(a) 11 + (–7)

Ans: 11 + (–7) = 11 – 7 = 4

(b) (–13) + (+18)

Ans: (–13) + 18 = 5

(c) (–10) + (+19)

Ans: (–10) + (+19) = –10 + 19 = 9

(d) (–250) + (+150)

Ans: (–250) + (+150) = –250 + 150 = –100

(e) (–380) + (–270)

Ans: (–380) + (–270) = –380 – 270 = –650

(f) (–217) + (–100)

Ans: (–217) + (–100) = –217 – 100 = –317

4. Find the sum of:

(a) 137 and –354

Ans: 137 + (–354) = 137 – 354 = –217

(b) –52 and 52

Ans: (–52) + 52 = 0

(c) –213, 39 and 192

Ans: (–213) + 39 + 192 = –213 + 231 = 18

(d) –50, –200 and 300

Ans: (–50) + (–200) + 300 = –50 – 200 + 300 = –250 + 300 = 50

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5. Find the value of:

(a) (−7) + (−9) + 4 + 16

Ans: (−7) + (−9) + 4 + 16
= −7 − 9 + 4 + 16
= −16 + 20
= 4

(b) 37 + (−2) + (−65) + (−8)

Ans: 37 + (−2) + (−65) + (−8)
= 37 − 2 − 65 − 8
= 37 − 75
= −38

Exercise 6.3

1. Subtract:

(a) 35 – (20)

Ans: 35 – 20 = 15

(b) 72 – (90)

Ans: 72 – 90 = –18

(c) (–15) – (–18)

Ans: (–15) – (–18) = –15 + 18 = 3

(d) (–20) – (13)

Ans: –20 – (13) = –20 – 13 = –33

(e) 23 – (–12)

Ans: 23 – (–12) = 23 + 12 = 35

(f) (–32) – (–40)

Ans: (–32) – (–40) = –32 + 40 = 8

2. Fill in the blanks with >, < or = sign:

(a) (–3) + (–6)___<___ (–3) – (–6)

(b)(–21) – (–1 ___>___ (–31) + (–11)

(c) 45 – (–11) ___>___ 57 + (–4)

(d)(–25) – (–42) ___>___(–42) – (–25)

3. Fill in the blanks:

(a) (–8) +_8_ = 0

(b) 13 + (−13) = 0

(c) 12 + (–12) =_0_

(d)(–4) + (−8) = –12

(e)_5_ – 15 = –10

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4. Find:

(a) (−7) − 8 − (−25)
Ans: (−7) − 8 − (−25)
$\qquad$ = −7 − 8 + 25
$\qquad$ = −15 + 25
$\qquad$ = 10

(b) (−13) + 32 − 8 − 1
Ans: (−13) + 32 − 8 − 1
$\qquad$ = −13 + 32 − 8 − 1
$\qquad$ = 32 − 22
$\qquad$ = 10

(c) (−7) + (−8) + (−90)
Ans: (−7) + (−8) + (−90)
$\qquad$ = −7 − 8 − 90
$\qquad$ = −105

(d) 50 − (−40) − (−2)
Ans: 50 − (−40) − (−2)
$\qquad$ = 50 + 40 + 2
$\qquad$ = 92