Integers
Exercise 1D

Solution 01

Answer :

(c) 14
Given:
6 − (−8)
= 6 + 8
= 14

Solution 02

Answer :

(b) −3
Given:
−9 − (−6)
= −9 + 6
= −3

Solution 03

Answer :

(d) 5
We can see that

−3 + 5 = 2

Hence, 2 exceeds −3 by 5.

Solution 04

Answer :

(a) 5
Let the number to be subtracted be x.
To find the number, we have:
−1 − x = −6
∴ x = −1 + 6 = 5

Solution 05

Answer :

(c) 4
We can see that
(−2) − (−6) = (−2) + 6 = 4

Hence, −6 is four (4) less than −2.

Solution 06

Answer :

(b) −8
Subtracting 4 from −4, we get:
(−4) − 4 = −8

Solution 07

Answer :

(b) 2
Required number = (−3) − (−5) = 5 − 3 = 2

Solution 08

Answer :

(c) 6
(−3) − x = −9
∴ x = (−3) + 9 = 6
Hence, 6 must be subtracted from −3 to get −9.

Solution 09

Answer :

(c) −11
Subtracting 6 from −5, we get:
(−5) − 6 = −11

Solution 10

Answer :

(c) 5
Subtracting −13 from −8, we get:
(−8) − (−13)
= −8 + 13
= 5

Solution 11

Answer :

(a) 4
(−36) ÷ (−9) = 4

Here, the negative signs in both the numerator and denominator got cancelled with each other.

Solution 12

Answer :

(b) 0
Dividing zero by any integer gives zero as the result.

Solution 13

Answer :

(c) not defined

Dividing any integer by zero is not defined.

Solution 14

Answer :

(b) −11 < −8

Negative integers decrease with increasing magnitudes.

Solution 15

Answer :

(b) 9

Let the other integer be a. Then, we have:
$-3 + a = 6$
$\therefore a = 6 - (-3) = 9$

Solution 16

Answer :

(a) −10
Let the other integer be a. Then, we have:
$6 + a = -4$
$\therefore a = -4 - 6 = -10$

Hence, the other integer is −10.

Solution 17

Answer :

(a) 22
Let the other integer be a. Then, we have:
$-8 + a = 14$
$\therefore a = 14 + 8 = 22$

Hence, the other integer is 22.

Solution 18

Answer :

(c) 6

The additive inverse of any integer a is $-a$.
Thus, the additive inverse of −6 is 6.

Solution 19

Answer :

(b) −150
We have $(-15) \times 8 + (-15) \times 2$
$= (-15) \times (8 + 2)$ [Associative property]
$= -150$

Solution 20

Answer :

(b) −24
We have $(-12) \times 6 - (-12) \times 4$
$= (-12) \times (6 - 4)$ [Associative property]
$= -24$

Solution 21

Answer :

(b) 810
$(-27) \times (-16) + (-27) \times (-14)$
$= (-27) \times (-16 + (-14))$ [Associative property]
$=(-27) \times (-30)$
$= 810$

Solution 22

Answer :

(a) −270
$30 \times (-23) + 30 \times 14$
$= 30 \times (-23 + 14)$ [Associative property]
$= 30 \times (-9)$
$= -270$

Solution 23

Answer :

(c) 152

Let the other integer be *a*. Then, we have:

−59 + *a* = 93

∴ *a* = 93 + 59 = 152

Solution 24

Answer :

(b) 90

$$x \div \left(-18\right) = -5$$

$$\Rightarrow \frac{x}{-18} = -5$$

$$\therefore x = -18 \times -5 = 90$$