

Worksheet -7

Subject: - Mathematics

Class: - VII

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Name: _____ Class & Sec: _____ Roll No. _____ Date: 24.04.2020

INTEGERS 9**EXAMPLE 1** Write down a pair of integers whose

- (a) sum is -3 (b) difference is -5
 (c) difference is 2 (d) sum is 0

SOLUTION (a) $(-1) + (-2) = -3$ or $(-5) + 2 = -3$

(b) $(-9) - (-4) = -5$ or $(-2) - 3 = -5$

(c) $(-7) - (-9) = 2$ or $1 - (-1) = 2$

(d) $(-10) + 10 = 0$ or $5 + (-5) = 0$

Can you write more pairs in these examples?

**EXERCISE 1.2**

1. Write down a pair of integers whose:

- (a) sum is
- -7
- (b) difference is
- -10
- (c) sum is
- 0

2. (a) Write a pair of negative integers whose difference gives 8 .(b) Write a negative integer and a positive integer whose sum is -5 .(c) Write a negative integer and a positive integer whose difference is -3 .3. In a quiz, team A scored $-40, 10, 0$ and team B scored $10, 0, -40$ in three successive rounds. Which team scored more? Can we say that we can add integers in any order?

4. Fill in the blanks to make the following statements true:

(i) $(-5) + (\dots\dots\dots) = (-8) + (\dots\dots\dots)$

(ii) $-53 + \dots\dots\dots = -53$

(iii) $17 + \dots\dots\dots = 0$

(iv) $[13 + (-12)] + (\dots\dots\dots) = \dots\dots\dots + [(-12) + (-7)]$

(v) $(-4) + [\dots\dots\dots + (-3)] = [\dots\dots\dots + 15] + \dots\dots\dots$

**1.4 MULTIPLICATION OF INTEGERS**

We can add and subtract integers. Let us now learn how to multiply integers.

1.4.1 Multiplication of a Positive and a Negative Integer

We know that multiplication of whole numbers is repeated addition. For example,

$$5 + 5 + 5 = 3 \times 5 = 15$$

Can you represent addition of integers in the same way?

Exercise 1.2 (Page 9)

1. Write down a pair of integers whose:

(a) sum is -7

(b) difference is -10

(c) sum is 0

Solution:

(a) $(+1) + (-8) = -7$

(b) $(-8) - (-2) = -10$

(c) $5 + (-5) = 0$

2. (a) Write a pair of negative integers whose difference gives 8 .

(b) Write a negative integer and a positive integer whose sum is -5 .

(c) Write a negative integer and a positive integer whose difference is -3 .

Solution:

(a) $-16 - (-8)$.

(b) $-10 + 5 = -5$.

(c) $-5 - (2) = -3$.

Exercise 1.3 (Page 21)

1. Find each of the following products:

(a) $3 \times (-1)$

(b) $(-1) \times 225$

(c) $(-21) \times (-30)$

(d) $(-316) \times (-1)$

(e) $(-15) \times 0 \times (-18)$

(f) $(-12) \times (-11) \times (10)$

(g) $9 \times (-3) \times (-6)$

(h) $(-18) \times (-5) \times (-4)$

(i) $(-1) \times (-2) \times (-3) \times 4$

(j) $(-3) \times (-6) \times (-2) \times (-1)$

Solution:

(a) $3 \times (-1) = -3$

(b) $(-1) \times 225 = -225$

(c) $(-21) \times (-30) = 630$

(d) $(-316) \times (-1) = 316$

(e) $(-15) \times 0 \times (-18) = 0$

$$(-10 + 30) + (-40) = -30.$$

So, both the teams have equal score.

Yes, we can add integers in any order.

4. Fill in the blanks to make the following statements true:

(i) $(-5) + (-8) = (-8) + (\dots\dots\dots)$

(ii) $-53 + \dots\dots\dots = -53$

(iii) $17 + \dots\dots\dots = 0$

(iv) $[13 + (-12)] + (\dots\dots\dots) = 13 + [(-12) + (-7)]$

(v) $(-4) + [15 + (-3)] = [-4 + 15] + \dots\dots\dots$

Solution:

(i) $(-5) + (-8) = (-8) + (\dots -5\dots)$

(ii) $(-53) + \dots 0 \dots = -53$

(iii) $17 + \dots -17 \dots = 0$

(iv) $[13 + (-12)] + (\dots -7 \dots) = 13 + [(-12) + (-7)]$

(v) $(-4) + [15 + (-3)] = [-4 + 15] + \dots -3 \dots$

Exercise 1.3 (Page 21)

3. In a quiz, team A scored -40 , 10 , 0 and team B scored 10 , 0 , -40 in three successive rounds. Which team scored more? Can we say that we can add integers in any order?

Solution:

Total score of team A = $-40 + 10 + 0$
 $= -30$.

Total score of team B = $10 + 0 + (-40)$
 $= -30$.

So, both the teams have equal score.

Yes, we can add integers in any order.

4. Fill in the blanks to make the following statements true:

(i) $(-5) + (-8) = (-8) + (\dots\dots\dots)$

(ii) $-53 + \dots\dots\dots = -53$

(iii) $17 + \dots\dots\dots = 0$

(iv) $[13 + (-12)] + (\dots\dots\dots) = 13 + [(-12) + (-7)]$

(v) $(-4) + [15 + (-3)] = [-4 + 15] + \dots\dots\dots$

Solution:

(d) $(-316) \times (-1)$

(e) $(-15) \times 0 \times (-18)$

(f) $(-12) \times (-11) \times (10)$

(g) $9 \times (-3) \times (-6)$

(h) $(-18) \times (-5) \times (-4)$

(i) $(-1) \times (-2) \times (-3) \times 4$

(j) $(-3) \times (-6) \times (-2) \times (-1)$

Solution:

(a) $3 \times (-1) = -3$

(b) $(-1) \times 225 = -225$

(c) $(-21) \times (-30) = 630$

(d) $(-316) \times (-1) = 316$

(e) $(-15) \times 0 \times (-18) = 0$

(f) $(-12) \times (-11) \times 10 = 1320$

(g) $9 \times (-3) \times (-6) = 162$

(h) $(-18) \times (-5) \times (-4) = -360$

(i) $(-1) \times (-2) \times (-3) \times 4 = -24$

(j) $(-3) \times (-6) \times (-2) \times (-1) = 36$

2. Verify the following: