

# Integers

## Worksheet 1 (Representation of Integers)

1 Indicate the following using '+' or '-' sign.

(i) A gain of ₹ 600.

600

(ii) 7°C below the freezing point.

-7°C

(iii) Decrease of 9.

-9

(iv) 2 km above sea level.

2 km

(v) A deposit of ₹ 200.

+200

(vi) A withdrawal of ₹ 300.

-₹300

2 Multiple choice questions

(i) The set of negative natural numbers and whole numbers is called

(a) natural numbers

(b) integers

(c) positive numbers

(d) 0

(ii) The greatest negative integer is

(a) -100

(b) -9

(c) -1

(d) Does not exist

(iii) The number which is neither positive nor negative, is

(a) 1

(b) 5

(c) 0

(d) 10

(iv) The smallest positive integer is

(a) 0

(b) 100

(c) 1

(d) 9

(v) On a horizontal number line, negative numbers are located on the \_\_\_\_\_ side of 0.

(a) right

(b) left

(c) above

(d) below

3 Choose the correct answer and fill in the blanks.

(i) The predecessor of +1 is 0.

[0/-1]

(ii) The successor of -1 is 0.

[0/1]

(iii) The predecessor of -8 is -9.

[-7/-9]

(iv) The predecessor of 0 is -1.

[-1/+1]

(v) 3 is the predecessor of 4.

[4/2]

(vi) -5 is the successor of -6.

[-6/-4]

4 Write opposite of the following.

(i) profit of ₹1000 → ₹1000 loss

(ii) 20 m East → 20 m west

(iii) 7 steps to right of zero → 7 steps to left of zero

(iv) 24 → -24

5 State whether the statements given below are true or false.

- (i) The integer  $-6$  is read as positive  $6$ .
- (ii)  $0$  (zero) is neither positive nor negative but an integer.
- (iii) The opposite of  $10$  km West is  $10$  km East.
- (iv)  $0$  is greater than  $-1$ .
- (v) The predecessor of  $-1$  is  $-2$  on a number line.
- (vi) Positive of a negative integer is negative.

6 Represent the following numbers on number line.

(i)  $-10$

(ii)  $+4$

(iii)  $-5$

(iv)  $+8$

## Worksheet 2 (Ordering of Integers)

1 Fill in the boxes using  $>$  or  $<$ .

(i)  $-4$    $-6$   $\rightarrow$   $>$

(iii)  $-14$    $14$   $\rightarrow$   $<$

(v)  $1$    $0$   $\rightarrow$   $>$

(vii)  $-10$    $-11$   $\rightarrow$   $>$

(ii)  $-25$    $-13$   $\rightarrow$   $<$

(iv)  $0$    $-26$   $\rightarrow$   $>$

(vi)  $-60$    $50$   $\rightarrow$   $<$

(viii)  $0$    $-2$   $\rightarrow$   $>$

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

(i)  $-3, -8$

(ii)  $-11, 10$

(iii)  $2, 6$

(iv)  $0, -1$

3 Write all the integers between

(i)  $0$  and  $9$   $\rightarrow$   $1, 2, 3, 4, 5, 6, 7, 8$ .

(iii)  $-7$  and  $4$   $\rightarrow$   $-6, -5, -4, -3, -2, -1, 0, 3, 2, 1$ .

(v)  $-10$  and  $-3$   $\rightarrow$   $-9, -8, -7, -6, -5, -4$ .

(vii)  $-14$  and  $2$   $\rightarrow$   $-13, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2$ .

(ii)  $-6$  and  $0$   $\rightarrow$   $-5, -4, -3, -2, -1$ .

(iv)  $-5$  and  $5$   $\rightarrow$   $-4, -3, -2, -1, 0, 1, 2, 3, 4$ .

(vi)  $19$  and  $12$   $\rightarrow$   $13, 14, 15, 16, 17, 18$ .

(viii)  $-22$  and  $-13$   $\rightarrow$   $-21, -20, -19, -18, -17, -16, -15, -14$ .

4 Say 'Yes' or 'No' for the following statements. If the answer is 'No', then write the correct statement.

(i)  $-6$  is to the right of  $-8$  on a number line.

(ii)  $-5$  is to the left of  $-40$  on a number line.

(iii) The smallest positive integer is  $1$ .

Yes  
No  
Yes

5 Draw a number line and answer the following questions.

(i) Which number will we reach, if we move  $3$  number to the left of  $1$ ?

(ii) Which number will we reach, if we move  $6$  number to the right of  $-4$ ?

(iii) If we are at  $6$  on the number line, in which direction should we move to reach  $-3$ ?

(iv) If we are at  $-4$  on the number line, in which direction should we move to reach  $2$ ?

- 6 (i) Write four negative integers less than  $-10$ .  $-11, -12, -13, -14$   
 (ii) Write four negative integers greater than  $-20$ .  $-19, -18, -17, -16$

7 Arrange the following integers in descending order.

- (i)  $10, 5, -5, 0, -7, -4$

10, 5, 0, -4, -5, -7

- (ii)  $0, -9, -11, -12, -7, -8$

0, -7, -8, -9, -11, -12

- (iii)  $-14, 9, -9, 5, 6, 0, -15$

9, 6, 5, 0, -14, -15

8 Arrange the following integers in ascending order.

- (i)  $-10, 12, 5, -7, -8, 13$

-10, -8, -7, 5, 12, 13

- (ii)  $-4, -3, -2, -9, -13, -12$

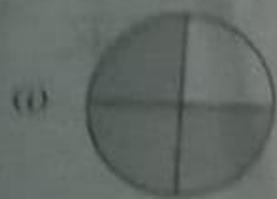
-13, -12, -9, -4, -3, -2

- (iii)  $-4, 3, 4, 6, -7, -6$

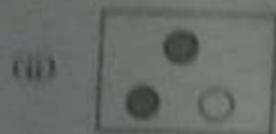
-7, -6, -4, 3, 4, 6

# Worksheet 3 (Equivalent Fractions)

1 Write the fractions. Are the fractions in each part equivalent?

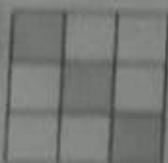
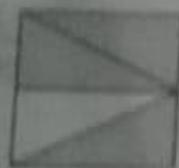


Yes



No

2 Write the fractions and pair up the equivalent fraction from each row.



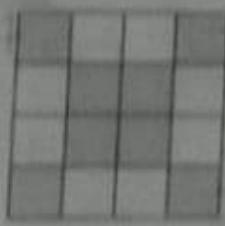
$\frac{4}{12} = \frac{2}{3}$



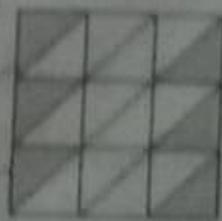
$\frac{3}{10}$



$\frac{4}{8}$



$\frac{8}{16} = \frac{2}{4}$



$\frac{5}{10} = \frac{1}{2}$



$\frac{6}{12} = \frac{1}{2}$

Write four equivalent fractions.

(i)  $\frac{3}{7} = \frac{6}{14} = \frac{9}{21} = \frac{12}{28} = \frac{15}{35}$

(ii)  $\frac{2}{5} = \frac{4}{10} = \frac{6}{15} = \frac{8}{20} = \frac{10}{25}$

(iii)  $\frac{9}{11} = \frac{18}{22} = \frac{27}{33} = \frac{36}{44} = \frac{45}{55}$

Fill in the value in the boxes.

(i)  $\frac{1}{5} = \frac{\square}{10} = \frac{3}{\square} = \frac{\square}{20}$  (ii)  $\frac{3}{8} = \frac{9}{\square} = \frac{15}{40} = \frac{27}{\square}$  (iii)  $\frac{1}{\square} = \frac{\square}{30} = \frac{5}{\square} = \frac{\square}{80}$  (iv)  $\frac{\square}{20} = \frac{14}{\square} = \frac{\square}{60} = \frac{\square}{\square}$

5 Fill in the blanks

- (i) Equivalent fraction of  $\frac{4}{7}$  with denominator 35 is  $\frac{20}{35}$ .
- (ii) Equivalent fraction of  $\frac{5}{6}$  with numerator 100 is  $\frac{100}{120}$ .
- (iii) Equivalent fraction of  $\frac{72}{108}$  with numerator 6 is  $\frac{6}{9}$ .
- (iv) Equivalent fraction of  $\frac{425}{625}$  with denominator 25 is  $\frac{17}{25}$ .
- (v) Equivalent fraction of  $\frac{13}{15}$  with numerator 169 is  $\frac{169}{195}$ .

6 Check whether the given fractions are equivalent or not.

- (i)  $\frac{4}{9}, \frac{36}{81}$  *yes* (ii)  $\frac{7}{13}, \frac{5}{11}$  *no* (iii)  $\frac{3}{13}, \frac{12}{52}$  *yes* (iv)  $\frac{2}{9}, \frac{18}{81}$  *yes*

7 Write each of the following fraction in simplest form.

- (i)  $\frac{40}{48} = \frac{5}{6}$  (ii)  $\frac{55}{99} = \frac{5}{9}$
- (iii)  $\frac{81}{126} = \frac{3}{14}$  (iv)  $\frac{60}{105} = \frac{4}{7}$

8 Ambuj had ₹ 300, Geeta had ₹ 500 and Raju had ₹ 800. After one week, Ambuj spend ₹ 150, Geeta spend ₹ 250 and Raju spend ₹ 400. What fraction did each spend? Check, if each has spend an equal fraction of his/her rupees.

## Worksheet 4 (Like & Unlike Fractions and Comparing of Fractions)

1 Choose the correct answer and fill in the blanks.

- (i) The fractions having same denominators, are called \_\_\_\_\_ fractions. [like/unlike]
- (ii)  $\frac{1}{5}, \frac{3}{5}, \frac{4}{5}, \frac{6}{7}$  are \_\_\_\_\_ fractions. [like/unlike]
- (iii)  $\frac{2}{9}, \frac{3}{10}, \frac{5}{11}, \frac{6}{11}$  are \_\_\_\_\_ fractions. [like/unlike]
- (iv)  $\frac{1}{11}, \frac{2}{11}, \frac{3}{11}, \frac{5}{11}$  are \_\_\_\_\_ fractions. [like/unlike]