

Worksheet -15

Subject: - Mathematics

Class: - VII

Teacher: - Ms. Neeru

Name: \_\_\_\_\_ Class & Sec: \_\_\_\_\_ Roll No. \_\_\_\_\_ Date:03.07.2020



### Multiplying Fractions with Cross Canceling

$$1) \quad \frac{3}{5} \times \frac{1}{3} = \frac{\overset{1}{\cancel{3}} \times 1}{5 \times \cancel{3}_1} = \frac{1}{5}$$

$$2) \quad \frac{2}{5} \times \frac{5}{10} = \frac{\overset{1}{\cancel{2}} \times \cancel{5}^1}{\underset{1}{\cancel{5}} \times \cancel{10}_5} = \frac{1}{5}$$

$$3) \quad \frac{2}{5} \times \frac{9}{10} = \frac{\overset{1}{\cancel{2}} \times 9}{5 \times \cancel{10}_5} = \frac{9}{25}$$

$$4) \quad \frac{2}{4} \times \frac{2}{3} = \frac{\overset{1}{\cancel{2}} \times \cancel{2}^1}{\underset{1}{\cancel{4}}_2 \times 3} = \frac{1}{3}$$

$$5) \quad \frac{4}{5} \times \frac{7}{10} = \frac{\overset{2}{\cancel{4}} \times 7}{5 \times \cancel{10}_5} = \frac{14}{25}$$

$$6) \quad \frac{2}{3} \times \frac{4}{5} = \frac{2 \times 4}{3 \times 5} = \frac{8}{15}$$

$$7) \quad \frac{1}{5} \times \frac{1}{3} = \frac{1 \times 1}{5 \times 3} = \frac{1}{15}$$

$$8) \quad \frac{1}{2} \times \frac{4}{10} = \frac{1 \times \cancel{4}^2}{\underset{1}{\cancel{2}} \times \cancel{10}_5} = \frac{1}{5}$$

$$9) \quad \frac{1}{2} \times \frac{2}{5} = \frac{1 \times \cancel{2}^1}{\underset{1}{\cancel{2}} \times 5} = \frac{1}{5}$$

$$10) \quad \frac{1}{5} \times \frac{1}{3} = \frac{1 \times 1}{5 \times 3} = \frac{1}{15}$$

## The four steps of dividing fractions

$$\text{Solve: } 25\frac{1}{2} \div 4\frac{1}{4}$$

*Step 1. Change to an improper fraction:*

$$25\frac{1}{2} \div 4\frac{1}{4} = ? \rightarrow \frac{51}{2} \div \frac{17}{4} = ?$$


*Step 2. Flip divisor into a reciprocal:*

$$\frac{51}{2} \div \frac{17}{4} = ? \rightarrow \frac{51}{2} \div \frac{4}{17} = ?$$

*Step 3. Change to multiplication and multiply:*

$$\frac{51}{2} \div \frac{4}{17} = ? \rightarrow \frac{51}{2} \times \frac{4}{17} = \frac{204}{34}$$

*Step 4. Simplify the solution:*



$$\frac{204}{34} \rightarrow 6$$

Find the Least Common Denominator first!

$$\frac{3}{10} + \frac{2}{5} - \frac{1}{20} = \frac{3}{10} \left( \frac{2}{2} \right) + \frac{2}{5} \left( \frac{4}{4} \right) - \frac{1}{20}$$



Different denominators

$$= \frac{6}{20} + \frac{8}{20} - \frac{1}{20}$$

$$= \frac{6+8-1}{20}$$

$$= \frac{13}{20}$$

Some pictures (a) to (f) are given below. Tell which of them show:

(1)  $2 \times \frac{1}{4}$

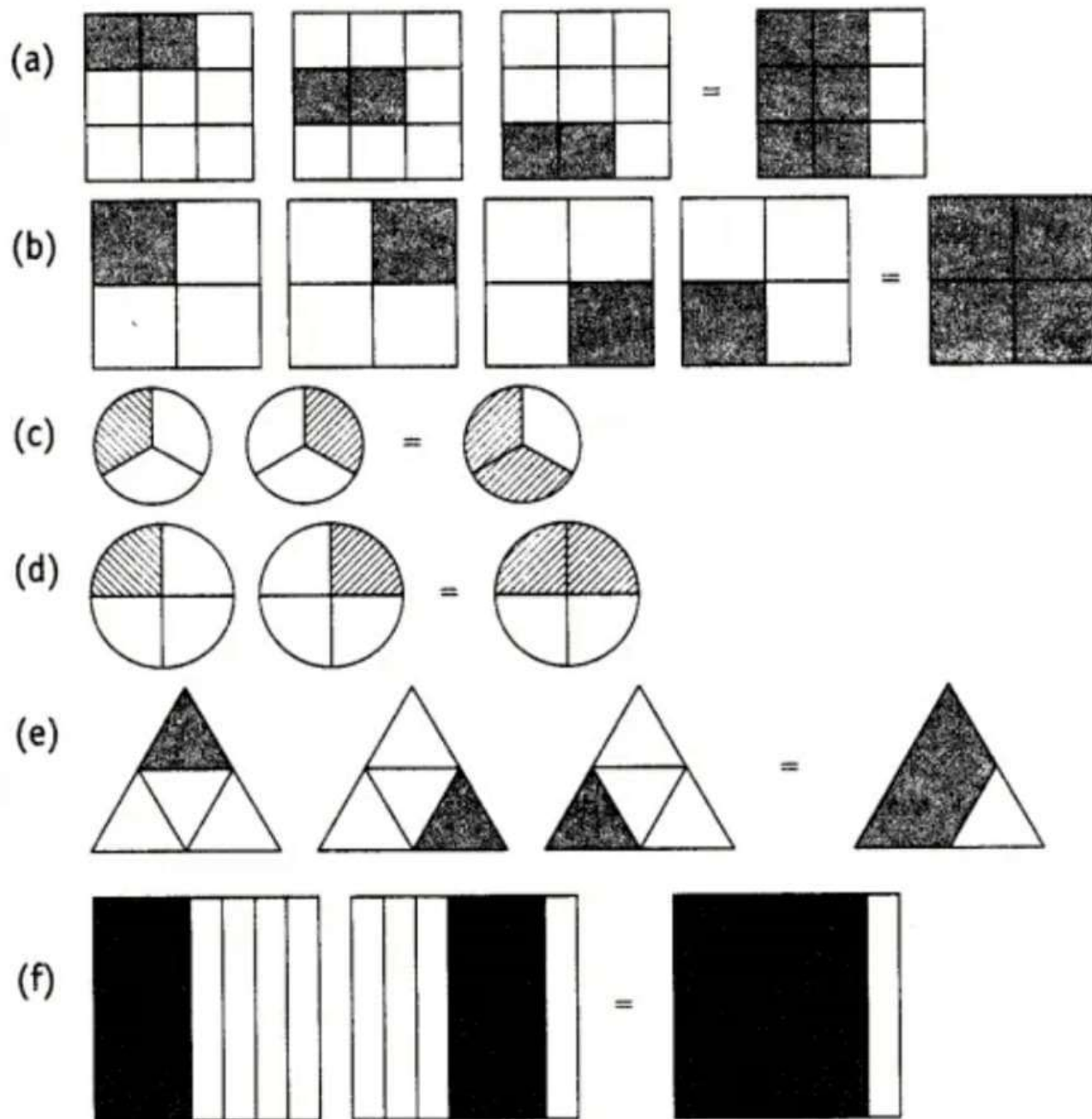
(2)  $2 \times \frac{3}{7}$

(3)  $2 \times \frac{1}{3}$

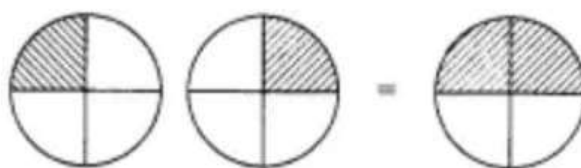
(4)  $\frac{1}{4} \times 4$

(5)  $3 \times \frac{2}{9}$

(6)  $\frac{1}{4} \times 3$

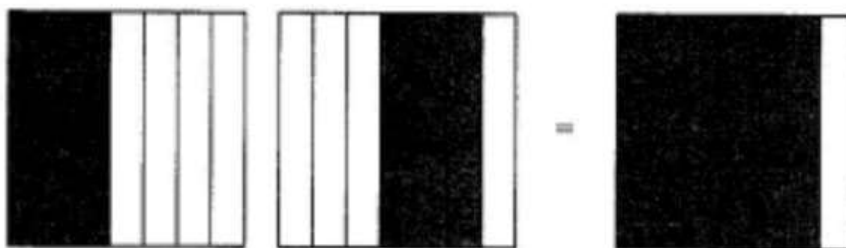


(1) → (d)



$$\frac{1}{4} + \frac{1}{4} = 2 \times \frac{1}{4}$$

(2) → (f)



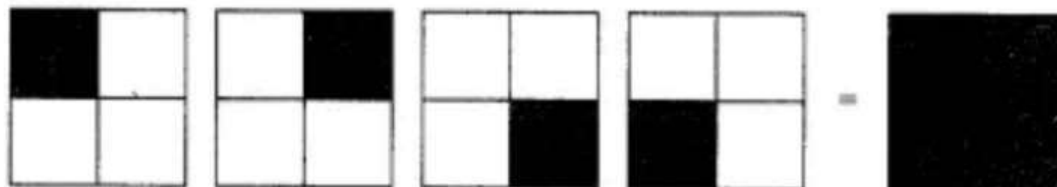
$$\frac{3}{7} + \frac{3}{7} = 2 \times \frac{3}{7}$$

(3) → (c)



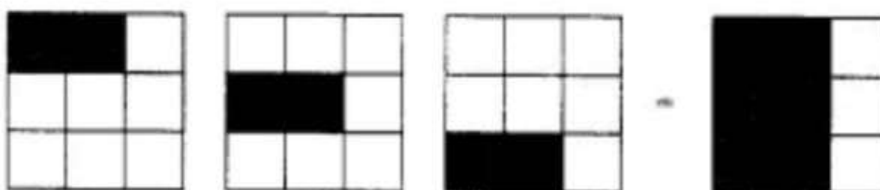
$$\frac{1}{3} + \frac{1}{3} = 2 \times \frac{1}{3}$$

(4) → (b)



$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 4 \times \frac{1}{4}$$

(5) → (a)



$$\frac{2}{9} + \frac{2}{9} + \frac{2}{9} = 3 \times \frac{2}{9}$$

(6) → (e)



$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 3 \times \frac{1}{4}$$

## Ch-2 INTEGERS Revision Test

1. Which of the following is the additive inverse of -32?

- A. -32
- B. 32
- C. 0

2. Fill in the blanks to make the statement true:  $(-3) + (-6) = (-6) + \text{-----}$

- A. -9
- B. -3
- C. 3

3. The value of  $32 \times 0$  is -----

- A. 32
- B. 320
- C. 0

4. Which number is known as the multiplicative identity for integers?

- A. 1
- B. 0
- C. -1

5. Determine the integer whose product with  $(-1)$  is  $-32$ ?

- A. 32
- B.  $-32$
- C. 1

6. For any integer  $a$ , what is  $(-1) \times a$  equal to?

- A.  $a$
- B.  $-a$
- C. 1

7. Replace the blank with an integer to make it a true statement.

$$(-2) \times \text{---} = 18$$

- A.  $-9$
- B. 9
- C. 0

8. Fill in the blanks:  $(-20)/10 = \text{---}$

- A.  $-2$
- B. 2
- C. 20



9. The sum of two numbers is  $-24$ . If one of them is  $-12$ , the other number is ----

A.  $-12$

B.  $12$

C.  $-36$

10.  $-22, -20, -18, -16, \_, \_, \_$  The next number in the series is ----

A.  $14$

B.  $-14$

C.  $-18$

**Answers:**

1.  $32$

2.  $-3$

3.  $0$

4.  $1$

5.  $32$

6.  $-a$

7.  $-9$

8.  $-2$

9.  $-12$

10.  $-14$