

Section A: Fractions (Medium Level)

1. Simplify:

a)  $\frac{24}{36}$

b)  $\frac{45}{60}$

2. Convert into improper fractions:

a)  $3\frac{2}{5}$

b)  $7\frac{1}{4}$

3. Add:

a)  $\frac{3}{7} + \frac{2}{7}$

b)  $\frac{5}{6} + \frac{1}{3}$

4. Subtract:

a)  $\frac{9}{10} - \frac{3}{10}$

b)  $\frac{7}{8} - \frac{1}{4}$

5. Multiply:

a)  $\frac{4}{5} \times \frac{3}{7}$

b)  $\frac{6}{11} \times \frac{11}{12}$

6. Divide:

a)  $\frac{5}{6} \div \frac{2}{3}$

b)  $\frac{9}{10} \div \frac{3}{5}$

7. Simplify:

$$\frac{3}{4} + \frac{5}{6} - \frac{7}{12}$$

8. Find the value:

$$\frac{2}{3} \times \frac{9}{10} \div \frac{3}{5}$$

9. If  $\frac{3}{5}$  of a number is 27, find the number.

10. Arrange in ascending order:

$$\frac{5}{6}, \frac{3}{4}, \frac{7}{8}$$

11. Simplify:

a)  $(-8) + 15$

b)  $12 + (-20)$

12. Subtract:

a)  $(-10) - (-5)$

b)  $7 - (-3)$

**13.** Multiply:

a)  $(-6) \times 4$

b)  $(-7) \times (-8)$

**14.** Divide:

a)  $(-20) \div 5$

b)  $36 \div (-6)$

**15.** Simplify:

$$(-5) + 8 - (-3) + (-6)$$

**16.** Find the value:

$$(-4) \times (-3) + 12 \div (-2)$$

**17.** Fill in the blanks:

a)  $(-7) + \underline{\quad} = 5$

b)  $\underline{\quad} \times (-6) = 48$

**18.** Riya ate  $\frac{3}{8}$  of a cake and her brother ate  $\frac{1}{4}$ .

How much cake did they eat together?

**19.** A rope is  $\frac{15}{2}$  meters long. If it is cut into pieces of length  $\frac{3}{2}$  meters each, how many pieces are formed?

**20.** A tank is filled to  $\frac{2}{3}$  of its capacity. If the total capacity is 90 liters, how much water is in the tank?

**21.** The temperature was  $5^{\circ}C$  in the morning and dropped by  $9^{\circ}C$  at night.

What is the temperature at night?

**22.** A submarine is at  $-120$  meters. It rises by 45 meters and then dives 30 meters.

What is its final position?

**23.** A player lost 15 points in a game, then gained 25 points, and lost 10 points again.

What is the final score?

**24.** Find a fraction which when multiplied by  $\frac{4}{7}$  gives  $\frac{2}{3}$ .

**25.** The sum of two integers is  $-10$ . One integer is 4. Find the other.