

3.3 # 45

$$[1] \quad \frac{5}{3} - \frac{7}{6} + \frac{5}{8}$$

$$[2] \quad = \frac{(5)(8)}{(3)(8)} - \frac{(7)(4)}{(6)(4)} + \frac{(5)(3)}{(8)(3)}$$

$$[3] \quad = \frac{40}{24} - \frac{28}{24} + \frac{15}{24}$$

$$[4] \quad = \frac{40 - 28 + 15}{24}$$

$$[5] \quad = \frac{12 + 15}{24}$$

$$[6] \quad = \frac{27}{24}$$

$$[7] \quad = \frac{3 \cdot \cancel{3} \cdot 3}{2 \cdot \cancel{2} \cdot 2}$$

$$[8] \quad = \frac{3 \cdot 3}{2 \cdot 2 \cdot 2}$$

$$[9] \quad = \frac{9}{8}$$

3: 3, 6, 9, 12, 15, 18, 21, 24, 27

6: 6, 12, 18, 24, 30

8: 8, 16, 24, 30

LCD = 24

Notes: I have put a [] and a number by each line of the problem so that you can reference it in the notes below.

The first thing we check is to see there are any mixed numbers or whole numbers and there are none; every number is a fraction.

We then go to the right side [see box above these notes] and write down each denominator. We then find the multiples for each denominator. We find the lowest common multiple and this becomes our LCD (Lowest Common Denominator)

We go back to the problem at line [2] and rewrite each fraction and then do the following.

1. We put each numerator and denominator in a ().
2. We compare each denominator to the LCD and see what factor we need to multiply by denominator to obtain the LCD.
 - a. The 1st denominator is (3) and we have to multiply an (8) times the (3) to get 24. We insert the factor of (8) in the numerator and denominator.
 - b. The 2nd denominator is (6) and we have to multiply a (4) times the (6) to get 24. We insert the factor of (4) in the numerator and denominator.
 - c. The 3rd denominator is (8) and we have to multiply a (3) times the (8) to get 24. We insert the factor of (3) in the numerator and denominator.
3. It is very important to insert the factor in the numerator and denominator to keep the fraction equivalent.

At line [3] we do the multiplication in each fraction and we see all of the denominators are the same.

At line [4] we write one fraction and the new numerator contains the old numerators with plus or minus signs. The denominator is just one denominator.

For lines [5] and [6] we simplify the numerators.