

Finding the Least Common Multiple of Two Numbers

F-LCD 1

Instructions: For each pair of numbers, fill in a row of the multiples chart by multiplying by 1, 2, 3, 4, etc. As soon as you find a common multiple, circle it. The circled number is the Least Common Multiple (or LCM). You do **not** need to fill up the whole table.

1 2 and 3

	x1	x2	x3	x4	x5	x6
2	2	4	6			
3	3	6				

2 3 and 4

	x1	x2	x3	x4	x5	x6
3	3	6	9	12		
4	4	8	12			

3 2 and 10

	x1	x2	x3	x4	x5	x6
2	2	4	6	8	10	
10	10					

4 8 and 10

	x1	x2	x3	x4	x5	x6
8	8	16	24	32	40	
10	10	20	30	40		

5 4 and 5

	x1	x2	x3	x4	x5	x6
4	4	8	12	16	20	
5	5	10	15	20		

6 4 and 6

	x1	x2	x3	x4	x5	x6
4	4	8	12			
6	6	12				

7 6 and 8

	x1	x2	x3	x4	x5	x6
6	6	12	18	24		
8	8	16	24			

8 3 and 5

	x1	x2	x3	x4	x5	x6
3	3	6	9	12	15	
5	5	10	15			

9 12 and 15

	x1	x2	x3	x4	x5	x6
12	12	24	36	48	60	
15	15	30	45	60		

10 6 and 21

	x1	x2	x3	x4	x5	x6	x7
6	6	12	18	24	30	36	42
21	21	42					

Finding the Least Common Denominator (LCD)

F-LCD 2

Instructions: Change these 'un-like' fractions into 'like' fractions using the LCD method. Use the multiples table to help find the LCM of the bottom numbers.

1

$\frac{3}{4}$ $\frac{1}{6}$

4 and 6

x1	x2	x3	x4	x5	x6
4	8	12			
6	12				

LCM becomes the LCD

$\frac{3}{3} \times \frac{3}{4} = \frac{9}{12}$ $\frac{1}{6} \times \frac{2}{2} = \frac{2}{12}$

2

$\frac{1}{2}$ $\frac{7}{10}$

2 and 10

x1	x2	x3	x4	x5	x6
2	4	6	8	10	
10					

$\frac{5}{5} \times \frac{1}{2} = \frac{5}{10}$ $\frac{7}{10} \times \frac{1}{1} = \frac{7}{10}$

3

$\frac{5}{6}$ $\frac{3}{8}$

6 and 8

x1	x2	x3	x4	x5	x6
6	12	18	24		
8	16	24			

$\frac{4}{4} \times \frac{5}{6} = \frac{20}{24}$ $\frac{3}{8} \times \frac{3}{3} = \frac{9}{24}$

4

$\frac{3}{10}$ $\frac{3}{8}$

10 and 8

x1	x2	x3	x4	x5	x6
10	20	30	40		
8	16	24	32	40	

$\frac{4}{4} \times \frac{3}{10} = \frac{12}{40}$ $\frac{3}{8} \times \frac{5}{5} = \frac{15}{40}$

Adding & Subtracting Fractions by the LCD Method

F-LCD 3

Instructions: Add or subtract these 'un-like' fractions. Start by using the LCD Method to turn them into 'like' fractions. You do **not** need to simplify your answers.

1 $\frac{2}{3} + \frac{7}{9}$

$$\frac{3}{3} \times \frac{2}{3} + \frac{7}{9} \times \frac{1}{1}$$

$$\frac{6}{9} + \frac{7}{9} = \frac{13}{9}$$

3 and 9

x1	x2	x3	x4	x5	x6
3	6	9			
9					

2 $\frac{4}{9} + \frac{1}{12}$

$$\frac{4}{4} \times \frac{4}{9} + \frac{1}{12} \times \frac{3}{3}$$

$$\frac{16}{36} + \frac{3}{36} = \frac{19}{36}$$

9 and 12

x1	x2	x3	x4	x5	x6
9	18	27	36		
12	24	36			

3 $\frac{7}{12} - \frac{4}{15}$

$$\frac{5}{5} \times \frac{7}{12} - \frac{4}{15} \times \frac{4}{4}$$

$$\frac{35}{60} - \frac{16}{60} = \frac{19}{60}$$

12 and 15

x1	x2	x3	x4	x5	x6
12	24	36	48	60	
15	30	45	60		

4 $\frac{3}{6} - \frac{3}{14}$

$$\frac{7}{7} \times \frac{3}{6} - \frac{3}{14} \times \frac{3}{3}$$

$$\frac{21}{42} - \frac{9}{42} = \frac{12}{42}$$

6 and 14

x1	x2	x3	x4	x5	x6	x7
6	12	18	24	30	36	42
14	28	42				

When 'Un-Like' Denominators are Multiples

F-LCD 4

Instructions: Add these 'un-like' fractions using the LCD method. In each problem, one bottom number is a multiple of the other. That means you won't need a table to find the LCM because the bigger bottom number is the LCM. You do **not** need to simplify your answers.

$$\begin{array}{l} \mathbf{1} \quad \frac{1}{2} + \frac{5}{6} \\ \frac{3}{3} \times \frac{1}{2} + \frac{5}{6} \\ \frac{3}{6} + \frac{5}{6} = \left(\frac{8}{6} \right) \end{array}$$

$$\begin{array}{l} \mathbf{2} \quad \frac{1}{8} + \frac{3}{4} \\ \frac{1}{8} + \frac{3}{4} \times \frac{2}{2} \\ \frac{1}{8} + \frac{6}{8} = \left(\frac{7}{8} \right) \end{array}$$

$$\begin{array}{l} \mathbf{3} \quad \frac{2}{3} + \frac{2}{9} \\ \frac{3}{3} \times \frac{2}{3} + \frac{2}{9} \\ \frac{6}{9} + \frac{2}{9} = \left(\frac{8}{9} \right) \end{array}$$

$$\begin{array}{l} \mathbf{4} \quad \frac{5}{12} + \frac{2}{6} \\ \frac{5}{12} + \frac{2}{6} \times \frac{2}{2} \\ \frac{5}{12} + \frac{4}{12} = \left(\frac{9}{12} \right) \end{array}$$

$$\begin{array}{l} \mathbf{5} \quad \frac{3}{4} + \frac{5}{16} \\ \frac{4}{4} \times \frac{3}{4} + \frac{5}{16} \\ \frac{12}{16} + \frac{5}{16} = \left(\frac{17}{16} \right) \end{array}$$

$$\begin{array}{l} \mathbf{6} \quad \frac{9}{25} + \frac{3}{5} \\ \frac{9}{25} + \frac{3}{5} \times \frac{5}{5} \\ \frac{9}{25} + \frac{15}{25} = \left(\frac{24}{25} \right) \end{array}$$

$$\begin{array}{l} \mathbf{7} \quad \frac{4}{3} + \frac{8}{15} \\ \frac{5}{5} \times \frac{4}{3} + \frac{8}{15} \\ \frac{20}{15} + \frac{8}{15} = \left(\frac{28}{15} \right) \end{array}$$

$$\begin{array}{l} \mathbf{8} \quad \frac{5}{21} + \frac{2}{3} \\ \frac{5}{21} + \frac{2}{3} \times \frac{7}{7} \\ \frac{5}{21} + \frac{14}{21} = \left(\frac{19}{21} \right) \end{array}$$

Un-Guided Practice with the LCD Method

F-LCD 5

Instructions: Add or subtract these 'un-like' fractions using the LCD method you learned in the video. Show your work and you do **not** need to simplify your answers.

$$\begin{aligned} \text{1} \quad & \frac{2}{3} + \frac{1}{6} \\ & \frac{2}{2} \times \frac{2}{3} + \frac{1}{6} \\ & \frac{4}{6} + \frac{1}{6} = \left(\frac{5}{6} \right) \end{aligned}$$

$$\begin{aligned} \text{2} \quad & \frac{7}{12} - \frac{1}{6} \\ & \frac{7}{12} - \frac{1}{6} \times \frac{2}{2} \\ & \frac{7}{12} - \frac{2}{12} = \left(\frac{5}{12} \right) \end{aligned}$$

$$\begin{aligned} \text{3} \quad & \frac{15}{24} + \frac{5}{8} \\ & \frac{15}{24} + \frac{5}{8} \times \frac{3}{3} \\ & \frac{15}{24} + \frac{15}{24} = \left(\frac{30}{24} \right) \end{aligned}$$

$$\begin{aligned} \text{4} \quad & \frac{9}{10} - \frac{1}{5} \\ & \frac{9}{10} - \frac{1}{5} \times \frac{2}{2} \\ & \frac{9}{10} - \frac{2}{10} = \left(\frac{7}{10} \right) \end{aligned}$$

$$\begin{aligned} \text{5} \quad & \frac{3}{8} + \frac{3}{2} \\ & \frac{3}{8} + \frac{3}{2} \times \frac{4}{4} \\ & \frac{3}{8} + \frac{12}{8} = \left(\frac{15}{8} \right) \end{aligned}$$

$$\begin{aligned} \text{6} \quad & \frac{3}{7} + \frac{5}{14} \\ & \frac{2}{2} \times \frac{3}{7} + \frac{5}{14} \\ & \frac{6}{14} + \frac{5}{14} = \left(\frac{11}{14} \right) \end{aligned}$$

$$\begin{aligned} \text{7} \quad & \frac{5}{3} - \frac{3}{4} \\ & \frac{4}{4} \times \frac{5}{3} - \frac{3}{4} \times \frac{3}{3} \\ & \frac{20}{12} - \frac{9}{12} = \left(\frac{11}{12} \right) \end{aligned}$$

LCM	
3	4
6	8
9	12
12	12

$$\begin{aligned} \text{8} \quad & \frac{4}{6} - \frac{3}{8} \\ & \frac{4}{4} \times \frac{4}{6} - \frac{3}{8} \times \frac{3}{3} \\ & \frac{16}{24} - \frac{9}{24} = \left(\frac{7}{24} \right) \end{aligned}$$

LCM	
6	8
12	16
18	24
24	24

Un-Guided Practice with the LCD Method - Set 2

F-LCD 6

Instructions: Add or subtract these 'un-like' fractions using the LCD method you learned in the video. Show your work and you do **not** need to simplify your answers.

$$\begin{aligned} \text{1} \quad & \frac{1}{2} + \frac{3}{14} \\ & \frac{7}{7} \times \frac{1}{2} + \frac{3}{14} \\ & \frac{7}{14} + \frac{3}{14} = \left(\frac{10}{14} \right) \end{aligned}$$

$$\begin{aligned} \text{2} \quad & \frac{16}{30} + \frac{1}{10} \\ & \frac{16}{30} + \frac{1}{10} \times \frac{3}{3} \\ & \frac{16}{30} + \frac{3}{30} = \left(\frac{19}{30} \right) \end{aligned}$$

$$\begin{aligned} \text{3} \quad & \frac{7}{16} - \frac{1}{4} \\ & \frac{7}{16} - \frac{1}{4} \times \frac{4}{4} \\ & \frac{7}{16} - \frac{4}{16} = \left(\frac{3}{16} \right) \end{aligned}$$

$$\begin{aligned} \text{4} \quad & \frac{8}{11} - \frac{5}{22} \\ & \frac{2}{2} \times \frac{8}{11} - \frac{5}{22} \\ & \frac{16}{22} - \frac{5}{22} = \left(\frac{11}{22} \right) \end{aligned}$$

$$\begin{aligned} \text{5} \quad & \frac{4}{5} + \frac{2}{3} \\ & \frac{3}{3} \times \frac{4}{5} + \frac{2}{3} \times \frac{5}{5} \\ & \frac{12}{15} + \frac{10}{15} = \left(\frac{22}{15} \right) \end{aligned}$$

LCM	
5	3
10	6
15	9
20	12
	15

$$\begin{aligned} \text{6} \quad & \frac{5}{6} - \frac{4}{30} \\ & \frac{5}{5} \times \frac{5}{6} - \frac{4}{30} \\ & \frac{25}{30} - \frac{4}{30} = \left(\frac{21}{30} \right) \end{aligned}$$

$$\begin{aligned} \text{7} \quad & \frac{5}{9} - \frac{10}{27} \\ & \frac{3}{3} \times \frac{5}{9} - \frac{10}{27} \\ & \frac{15}{27} - \frac{10}{27} = \left(\frac{5}{27} \right) \end{aligned}$$

$$\begin{aligned} \text{8} \quad & \frac{7}{9} - \frac{5}{12} \\ & \frac{4}{4} \times \frac{7}{9} - \frac{5}{12} \times \frac{3}{3} \\ & \frac{28}{36} - \frac{15}{36} = \left(\frac{13}{36} \right) \end{aligned}$$

LCM	
9	12
18	24
27	36
36	