

Least Common Multiple and Greatest Common Factor

Least Common Multiple

1. Find the LCM of 4 and 6.

2. Find the LCM of 8 and 12.

3. Find the LCM of 4, 6, and 9.

Greatest Common Factor

The Long Way

Find the GCF of 24 and 36

Find the GCF

1. 24 and 36
2. 60 and 75
3. 48, 72, and 120

You Try:

1. Find the LCM of 6 and 9.

Find the GCF

2. 81 and 27

3. 64 and 96

4. 45, 27, and 63

5. Find the LCM of 7 and 4.

6. Find the LCM of 5, 6, and 12.

Least Common Multiple and Greatest Common Factor

Least Common Multiple

1. Find the LCM of 4 and 6.

$$4: 4, 8, \textcircled{12}, 16, 20 \dots$$

$$6: 6, \textcircled{12}, 18, 24 \dots$$

2. Find the LCM of 8 and 12.

$$8: 8, 16, \textcircled{24}, 32, 40$$

$$12: 12, \textcircled{24}, 36, 48$$

3. Find the LCM of 4, 6, and 9.

$$4: 4, 8, 12, 16, 20, 24, 28, 32, \textcircled{36}, 40$$

$$6: 6, 12, 18, 24, 30, \textcircled{36}, 42$$

$$9: 9, 18, 27, \textcircled{36}, 45, 54$$

Greatest Common Factor

The Long Way

Find the GCF of 24 and 36

$$\begin{array}{r} 24 \\ 1 \times 24 \\ 2 \times \textcircled{12} \\ 3 \times 8 \\ 4 \times 6 \end{array}$$

$$\begin{array}{r} 36 \\ 1 \times 36 \\ 2 \times 18 \\ 3 \times \textcircled{12} \\ 4 \times 9 \end{array}$$

Find the GCF

1. 24 and 36

2. 60 and 75

3. 48, 72, and 120

$$\begin{array}{r} 2 | 24 \quad 36 \\ 2 | 12 \quad 18 \\ 3 | 6 \quad 9 \\ \hline 2 \quad 3 \end{array}$$

$\text{GCF} = 12$

$$\begin{array}{r} 5 | 60 \quad 75 \\ 3 | 12 \quad 15 \\ \hline 4 \quad 5 \end{array}$$

$\text{GCF} = 15$

$$\begin{array}{r} 2 | 48 \quad 72 \quad 120 \\ 2 | 24 \quad 36 \quad 60 \\ 3 | 12 \quad 18 \quad 30 \\ \hline 2 \quad 6 \quad 10 \\ 2 \quad 3 \quad 5 \end{array}$$

$\text{GCF} = 24$

You Try:

1. Find the LCM of 6 and 9.

$$6: 6, 12, \textcircled{18}, 24, 30 \dots$$

$$9: 9, \textcircled{18}, 27, 36 \dots$$

Find the GCF

2. 81 and 27

$$\begin{array}{r} 81 \\ 27 \\ \hline 9 \\ 9 \\ \hline 3 \\ 3 \\ \hline 1 \end{array}$$

$$\rightarrow \text{GCF} = 27$$

3. 64 and 96

$$\begin{array}{r} 64 \quad 96 \\ \hline 2 \quad | 32 \quad 48 \\ 2 \quad | 16 \quad 24 \\ 4 \quad | 8 \quad 12 \\ \hline & 2 \quad 3 \end{array}$$

$$\rightarrow \text{GCF} = 32$$

4. 45, 27, and 63

$$\begin{array}{r} 45 \quad 27 \quad 63 \\ \hline 9 \quad | \quad 5 \quad 3 \quad 7 \\ \hline & & & \end{array}$$

$$\rightarrow \text{GCF} = 9$$

5. Find the LCM of 7 and 4.

$$7: 7, 14, 21, \textcircled{28}, 35, \dots$$

$$4: 4, 8, 12, 16, 20, 24, \textcircled{28}, 32 \dots$$

6. Find the LCM of 5, 6, and 12.

$$5: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, \textcircled{60}$$

$$6: 6, 12, 18, 24, 30, 36, 42, 48, 54, \textcircled{60}$$

$$12: 12, 24, 36, 48, \textcircled{60}$$