

Simplify

1. $\frac{12}{18} \div \frac{2}{3}$

GCF: 6

12:6 = 2
18:6 = 3

Factors of 12: 1x12, 2x6, 3x4, 4x3, 6x2, 12x1

Factors of 18: 1x18, 2x9, 3x6, 6x3, 9x2, 18x1

2. $\frac{30}{45} \div \frac{2}{3}$

GCF: 15

30:15 = 2
45:15 = 3

Factors of 30: 1x30, 2x15, 3x10, 5x6, 6x5, 10x3, 15x2, 30x1

Factors of 45: 1x45, 3x15, 5x9, 9x5, 15x3, 45x1

3. $\frac{16}{24} \div \frac{2}{3}$

GCF: 8

16:8 = 2
24:8 = 3

Factors of 16: 1x16, 2x8, 4x4, 8x2, 16x1

Factors of 24: 1x24, 2x12, 3x8, 4x6, 6x4, 8x3, 12x2, 24x1

Factors of 16: 1x16, 2x8, 4x4, 8x2, 16x1

Factors of 24: 1x24, 2x12, 3x8, 4x6, 6x4, 8x3, 12x2, 24x1

Factors of 21: 1x21, 3x7, 7x3, 21x1

Factors of 63: 1x63, 3x21, 7x9, 9x7, 21x3, 63x1

4. $\frac{42}{56} \div \frac{3}{4}$

GCF: 14

42:14 = 3
56:14 = 4

Factors of 42: 1x42, 2x21, 3x14, 6x7, 7x6, 14x3, 21x2, 42x1

Factors of 56: 1x56, 2x28, 4x14, 7x8, 8x7, 14x4, 28x2, 56x1

5. $\frac{21}{63} \div \frac{1}{3}$

GCF: 21

21:21 = 1
63:21 = 3

Now.....

- ALWAYS SIMPLIFY YOUR ANSWERS
 - > When converting, adding, subtracting, multiplying, dividing, etc., always simplify.
 - > Fractions must be reduced to simplest form.

To improper

$$1 \frac{13}{26} = \frac{39}{26} = \frac{3}{2}$$

Example To mixed

$$\frac{42}{5} = 8 \frac{2}{5}$$

39

26

1x39
3x13

1x26
2x13

$$\begin{array}{r} 8R2 \\ 5 \overline{) 42} \\ \underline{-40} \\ 2 \end{array}$$

$$8 \frac{4}{12} = 8 \frac{1}{3}$$

4
1x4
2x2

12
1x12
2x6
4x3

Convert Improper Fractions to Mixed Numbers

1. $\frac{17}{5} = 3\frac{2}{5}$

$$\begin{array}{r} 3R2 \\ 5 \overline{)17} \\ \underline{-15} \\ 2 \end{array}$$

4. $\frac{50}{9}$

2. $\frac{29}{6} = 4\frac{5}{6}$

$$\begin{array}{r} 4R5 \\ 6 \overline{)29} \\ \underline{-24} \\ 5 \end{array}$$

5. $\frac{23}{4}$

3. $\frac{45}{8} = 5\frac{5}{8}$

$$\begin{array}{r} 5R5 \\ 8 \overline{)45} \\ \underline{-40} \\ 5 \end{array}$$

Convert Mixed Numbers to Improper Fractions

1. $3\frac{2}{5} = \frac{17}{5}$

Handwritten red annotations: A curved arrow from the whole number 3 to the denominator 5, and a curved arrow from the numerator 2 to the denominator 5. A red 'x' is next to the plus sign.

4. $7\frac{5}{6}$

2. $6\frac{1}{4} = \frac{25}{4}$

Handwritten blue annotations: A curved arrow from the whole number 6 to the denominator 4, and a curved arrow from the numerator 1 to the denominator 4. A blue 'x' is next to the plus sign.

5. $4\frac{2}{3}$

3. $2\frac{3}{8} = \frac{19}{8}$

Handwritten blue annotations: A curved arrow from the whole number 2 to the denominator 8, and a curved arrow from the numerator 3 to the denominator 8. A blue 'x' is next to the plus sign.

Practice

