

Fast 5

$2124 \div 4$

358×38

45.5×3

$123659 + 45856$

$96863 - 4528$

Fast 5

$$2124 \div 4 = 531$$

$$358 \times 38 = 13604$$

$$45.5 \times 3 = 136.5$$

$$123659 + 45856 = 169515 \quad 96863 - 4528 = 92335$$

Can I add and subtract fractions
with different denominators?

$$\frac{1}{4} + \frac{3}{8}$$

We need to add these two fractions together, but their denominators aren't the same.

Let's look at what we can do to work this out.

$$\begin{array}{c} \frac{1}{4} + \frac{3}{8} \\ \downarrow \quad \downarrow \\ \frac{2}{8} + \frac{3}{8} \end{array}$$

Luckily, 4 and 8 share a common multiple in 8.

To balance out our calculation with the same denominator, we can convert our quarters into eighths by multiplying 1 and 4 by 2, which is how many times 4 goes into 8.

$$\begin{array}{ccc} \frac{1}{4} & + & \frac{3}{8} \\ \downarrow & & \downarrow \\ \frac{2}{8} & + & \frac{3}{8} = \frac{5}{8} \end{array}$$

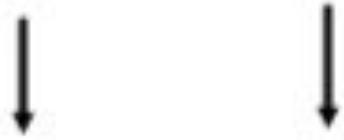
Now we can continue to solve our problem in the method we know for fractions that have the same denominator.

$$\frac{1}{3} + \frac{4}{7}$$

Now we need to add these fractions together.

They don't have denominators that allow us to convert our thirds into sevenths, but we can still find a common multiple 3 and 7 share to find our new denominator.

$$\frac{1}{3} + \frac{4}{7}$$



$$\frac{7}{21} + \frac{12}{21}$$

3 and 7 share a common multiple in 21.

To convert $\frac{1}{3}$ into our new equivalent fraction, we multiply 1 and 3 by 7, as $3 \times 7 = 21$ and 3 is our denominator.

To convert $\frac{4}{7}$, we multiply 4 and 7 by 3, as $7 \times 3 = 21$ and 7 is our denominator.

This leaves us with our new addition calculation.

$$\frac{1}{3} + \frac{4}{7}$$

↓ ↓

$$\frac{7}{21} + \frac{12}{21} = \frac{19}{21}$$

From here, we can add our new fractions together to get our answer.

Try these two

$$\frac{2}{5} + \frac{3}{10}$$

$$\frac{2}{4} + \frac{2}{6}$$

$$\frac{2}{5} + \frac{3}{10}$$

↓ ↓

$$\frac{4}{10} + \frac{3}{10} = \frac{7}{10}$$

$$\frac{2}{4} + \frac{2}{6}$$

↓ ↓

$$\frac{6}{12} + \frac{4}{12} = \frac{10}{12}$$

$$\frac{7}{8} - \frac{2}{4}$$

Subtraction works in a similar way when looking at fractions with different denominators.

Let's look at this subtraction as an example.

$$\frac{7}{8} - \frac{2}{4}$$



$$\frac{7}{8} - \frac{4}{8} = \frac{3}{8}$$

Just like with addition, with subtraction, we need to find the common multiple that the denominators share and use that as a starting point.