Proper Fractions Example

A proper fraction has a numerator smaller than its positive denominator, so its value is less than 1. Add 3/8 and 1/4 by expressing both parts in eighths. A common denominator represents equal-sized fractional units, allowing the numerators to be combined without changing the quantities.

Example

Add 3/8 + 1/4.

$$3/8 + 1/4$$

Step-by-step solution

STEP 1

Check the fractions

3 is less than 8 and 1 is less than 4, so both fractions are proper.

$$3/8 < 1;\ 1/4 < 1$$

STEP 2

Use a common denominator

The least common denominator of 8 and 4 is 8.

$$1/4 = 2/8$$

STEP 3

Add the numerators

The denominators now represent equal-sized parts.

$$3/8 + 2/8 = 5/8$$

STEP 4

Confirm the result

5/8 is simplified and remains less than 1.

$$\gcd(5,8) = 1;\ 5/8 < 1$$

ANSWER

3/8 + 1/4 = 5/8

As decimals, 0.375 + 0.25 = 0.625, which equals 5/8.

Use this worked example to review the method, then try a similar problem on your own.