Guide to:
Operations with fractions

maths Links

Explanation:

Before adding, subtracting, multiplying, or dividing mixed numbers, always convert any mixed numbers into **improper (top-heavy) fractions** first. To add or subtract fractions, find a **common denominator**, convert both numerators, and then add or subtract the numerators only.

To multiply fractions, multiply the numerators together and multiply the denominators together. To divide by a fraction, use **Keep, Change, Flip**: keep the first fraction, change ÷ to ×, and flip the second fraction upside down. Simplify your final answer and convert back to a mixed number if required.

Example 1: Work out $2\frac{3}{4} - 1\frac{2}{5}$

Solution:

Improper fractions: $\frac{11}{4} - \frac{7}{5}$

Common denominator of 4 and 5 is **20**:

$= \frac{55}{20} - \frac{28}{20} = \frac{27}{20}$

Answer: $\mathbf{1\frac{7}{20}}$

Example 2: Work out $1\frac{4}{5} \div \frac{3}{10}$

Solution:

Improper fraction: $1\frac{4}{5} = \frac{9}{5}$

Keep, Change, Flip: $\frac{9}{5} \times \frac{10}{3}$

Multiply across: $\frac{9 \times 10}{5 \times 3} = \frac{90}{15}$

Answer: 6

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