

Example: Workout and simplify if needed.

a) $\frac{9 \times 2}{10 \times 2} + \frac{11}{20}$

$$\frac{18}{20} + \frac{11}{20} = \frac{29}{20} = 1 \frac{9}{20}$$

b) $\frac{8}{9} + \frac{6}{7 \times 4}$

$$\frac{56}{63} + \frac{54}{63} = \frac{110}{63} = 1 \frac{47}{63}$$

$$\begin{array}{r} + 56 \\ 54 \\ \hline 110 \end{array}$$

c) $1 \frac{3 \times 5}{4 \times 5} + 2 \frac{4 \times 4}{5 \times 4}$

$$3 \frac{15}{20} + \frac{16}{20} = 3 \frac{31}{20} = 4 \frac{11}{20}$$

d) $5 \frac{1 \times 6}{6 \times 6} + 3 \frac{5 \times 4}{9 \times 4}$

$$8 \frac{6}{36} + \frac{20}{36} =$$

$$8 \frac{26}{36}$$

e) $4 \frac{3 \times 6}{7 \times 5} + 3 \frac{3 \times 7}{5 \times 7}$

$$7 \frac{18}{35} + \frac{21}{35} = 7 \frac{39}{35} = 8 \frac{4}{35}$$

f) $3 \frac{2 \times 4}{3 \times 4} + 5 \frac{3 \times 3}{4 \times 3}$

$$8 \frac{8}{12} + \frac{9}{12} = 8 \frac{17}{12} = 9 \frac{5}{12}$$

g) $6 \frac{13}{15} + 3 \frac{4 \times 3}{5 \times 3}$

$$9 \frac{13}{15} + \frac{12}{15} = 9 \frac{25}{15} = 9 \frac{5}{3} = 10 \frac{2}{3}$$

h) $4 \frac{3 \times 7}{8 \times 7} + 7 \frac{3 \times 6}{7 \times 6}$

$$11 \frac{21}{56} + \frac{24}{56} = 11 \frac{45}{56}$$

i) $9 \frac{7 \times 4}{8 \times 4} + 3 \frac{3 \times 2}{4 \times 2}$

$$12 \frac{7}{8} + \frac{6}{8} = 12 \frac{13}{8} = 15 \frac{5}{8}$$

j) $8 \frac{4 \times 2}{7 \times 2} + 9 \frac{10}{14}$

$$17 \frac{8}{14} + \frac{10}{14} = 17 \frac{18}{14} = 18 \frac{4}{14}$$

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Word problems.

Problem 1:

A bag of sugar has a mass of $2\frac{3}{8}$ kg. A second bag has a mass of $3\frac{9}{16}$ kg.

What mass of sugar is there altogether?

$$2\frac{3 \times 2}{8 \times 2} + 3\frac{9}{16} =$$
$$5\frac{6}{16} + \frac{9}{16} = 5\frac{15}{16} \text{ kg}$$

Problem 2:

Sarah baked a cake and ate $2\frac{1}{3}$ of it, while her brother John ate $3\frac{1}{4}$ of the same cake.

How much of the cake did they eat together?

$$2\frac{1 \times 4}{3 \times 4} + 3\frac{1 \times 3}{4 \times 3} =$$
$$5\frac{4}{12} + \frac{3}{12} = 5\frac{7}{12} \text{ of the cake}$$

Problem 3:

Three pieces of carpet $3\frac{1}{5}$ meters, $4\frac{3}{4}$ meters and $2\frac{1}{2}$ meters long are joined together.

How long is the joined carpet?

$$3\frac{1 \times 4}{5 \times 4} + 4\frac{3 \times 5}{4 \times 5} + 2\frac{1 \times 10}{2 \times 10} =$$
$$9\frac{4}{20} + \frac{15}{20} + \frac{10}{20} = 9\frac{29}{20} = 10\frac{9}{20}$$