

Adding Fractions

with the Unlike Denominator, Requires Simplifying

The diagram shows the following steps:

$$\frac{1}{3} + \frac{1}{6}$$

$$\frac{1}{3} = \frac{2}{6}$$

$$\frac{1}{3} = \frac{2}{6}$$

$$\frac{1}{6} = \frac{1}{6}$$

same

$$\frac{1}{3} = \frac{2}{6}$$

$$\frac{1}{6} = \frac{1}{6}$$

$$\frac{3}{6}$$

$$\frac{1}{3} + \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$$

a.
$$\frac{1}{8} + \frac{1}{4}$$

b.
$$\frac{1}{1} + \frac{5}{2}$$

c.
$$\frac{2}{4} + \frac{4}{2}$$

d.
$$\frac{3}{1} + \frac{3}{2}$$

e.
$$\frac{4}{6} + \frac{1}{1}$$

f.
$$\frac{4}{4} + \frac{2}{2}$$

g.
$$\frac{1}{4} + \frac{2}{8}$$

h.
$$\frac{5}{1} + \frac{3}{2}$$

i.
$$\frac{4}{4} + \frac{2}{2}$$

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

k.
$$\frac{3}{2} + \frac{1}{3}$$

l.
$$\frac{4}{4} + \frac{1}{1}$$

m.
$$\frac{6}{5} + \frac{1}{1}$$

n.
$$\frac{2}{2} + \frac{1}{4}$$

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

p.
$$\frac{2}{1} + \frac{4}{4} + \frac{3}{4}$$

q.
$$\frac{1}{2} + \frac{1}{8} + \frac{2}{2}$$

r.
$$\frac{1}{1} + \frac{1}{2} + \frac{4}{4}$$

s.
$$\frac{3}{2} + \frac{1}{2} + \frac{2}{2}$$

t.
$$\frac{4}{2} + \frac{1}{1} + \frac{1}{1} + \frac{1}{4}$$

Adding Fractions ANSWER KEY

With the Unlike Denominator, Requires Simplifying

- a. $\frac{1}{8} = \frac{1}{8}$
 $\frac{1}{4} = \frac{2}{8}$

$$\begin{array}{r} \frac{1}{8} \\ + \frac{2}{8} \\ \hline \frac{3}{8} \end{array}$$
- b. $\frac{1}{1} = \frac{2}{2}$
 $\frac{5}{2} = \frac{5}{2}$

$$\begin{array}{r} \frac{2}{2} \\ + \frac{5}{2} \\ \hline \frac{7}{2} \end{array}$$
- c. $\frac{2}{4} = \frac{2}{4}$
 $\frac{4}{4} = \frac{8}{4}$

$$\begin{array}{r} \frac{2}{4} \\ + \frac{8}{4} \\ \hline \frac{10}{4} = \frac{5}{2} \end{array}$$
- d. $\frac{3}{1} = \frac{6}{2}$
 $\frac{3}{2} = \frac{3}{2}$

$$\begin{array}{r} \frac{6}{2} \\ + \frac{3}{2} \\ \hline \frac{9}{2} \end{array}$$
- e. $\frac{4}{6} = \frac{4}{6}$
 $\frac{1}{1} = \frac{6}{6}$

$$\begin{array}{r} \frac{4}{6} \\ + \frac{6}{6} \\ \hline \frac{10}{6} = \frac{5}{3} \end{array}$$
- f. $\frac{4}{4} = \frac{4}{4}$
 $\frac{2}{4} = \frac{4}{4}$

$$\begin{array}{r} \frac{4}{4} \\ + \frac{4}{4} \\ \hline \frac{8}{4} = \frac{2}{1} \end{array}$$
- g. $\frac{1}{4} = \frac{2}{8}$
 $\frac{2}{8} = \frac{2}{8}$

$$\begin{array}{r} \frac{2}{8} \\ + \frac{2}{8} \\ \hline \frac{4}{8} = \frac{1}{2} \end{array}$$
- h. $\frac{5}{1} = \frac{10}{2}$
 $\frac{3}{2} = \frac{3}{2}$

$$\begin{array}{r} \frac{10}{2} \\ + \frac{3}{2} \\ \hline \frac{13}{2} \end{array}$$
- i. $\frac{4}{4} = \frac{4}{4}$
 $\frac{2}{4} = \frac{8}{4}$

$$\begin{array}{r} \frac{4}{4} \\ + \frac{8}{4} \\ \hline \frac{12}{4} = \frac{3}{1} \end{array}$$
- j. $\frac{4}{2} = \frac{12}{6}$
 $\frac{2}{6} = \frac{2}{6}$

$$\begin{array}{r} \frac{12}{6} \\ + \frac{2}{6} \\ \hline \frac{14}{6} = \frac{7}{3} \end{array}$$
- k. $\frac{3}{2} = \frac{9}{6}$
 $\frac{1}{6} = \frac{2}{6}$

$$\begin{array}{r} \frac{9}{6} \\ + \frac{2}{6} \\ \hline \frac{11}{6} \end{array}$$
- l. $\frac{4}{4} = \frac{4}{4}$
 $\frac{1}{4} = \frac{4}{4}$

$$\begin{array}{r} \frac{4}{4} \\ + \frac{4}{4} \\ \hline \frac{8}{4} = \frac{2}{1} \end{array}$$
- m. $\frac{6}{5} = \frac{6}{5}$
 $\frac{1}{5} = \frac{5}{5}$

$$\begin{array}{r} \frac{6}{5} \\ + \frac{5}{5} \\ \hline \frac{11}{5} \end{array}$$
- n. $\frac{2}{2} = \frac{4}{4}$
 $\frac{1}{4} = \frac{1}{4}$

$$\begin{array}{r} \frac{4}{4} \\ + \frac{1}{4} \\ \hline \frac{5}{4} \end{array}$$
- o. $\frac{2}{6} = \frac{2}{6}$
 $\frac{4}{6} = \frac{12}{6}$

$$\begin{array}{r} \frac{2}{6} \\ + \frac{12}{6} \\ \hline \frac{14}{6} = \frac{7}{3} \end{array}$$
- p. $\frac{2}{1} = \frac{8}{4}$
 $\frac{4}{4} = \frac{4}{4}$
 $\frac{3}{4} = \frac{3}{4}$

$$\begin{array}{r} \frac{8}{4} \\ + \frac{4}{4} \\ + \frac{3}{4} \\ \hline \frac{15}{4} \end{array}$$
- q. $\frac{1}{2} = \frac{4}{8}$
 $\frac{1}{8} = \frac{1}{8}$
 $\frac{2}{8} = \frac{8}{8}$

$$\begin{array}{r} \frac{4}{8} \\ + \frac{1}{8} \\ + \frac{8}{8} \\ \hline \frac{13}{8} \end{array}$$
- r. $\frac{1}{1} = \frac{4}{4}$
 $\frac{1}{2} = \frac{2}{4}$
 $\frac{4}{4} = \frac{4}{4}$

$$\begin{array}{r} \frac{4}{4} \\ + \frac{2}{4} \\ + \frac{4}{4} \\ \hline \frac{10}{4} = \frac{5}{2} \end{array}$$
- s. $\frac{3}{2} = \frac{3}{2}$
 $\frac{1}{2} = \frac{1}{2}$
 $\frac{2}{2} = \frac{4}{2}$

$$\begin{array}{r} \frac{3}{2} \\ + \frac{1}{2} \\ + \frac{4}{2} \\ \hline \frac{8}{2} = \frac{4}{1} \end{array}$$
- t. $\frac{4}{2} = \frac{8}{4}$
 $\frac{1}{4} = \frac{4}{4}$
 $\frac{1}{4} = \frac{1}{4}$

$$\begin{array}{r} \frac{8}{4} \\ + \frac{4}{4} \\ + \frac{1}{4} \\ \hline \frac{13}{4} \end{array}$$