

# Adding and Subtracting Fractions with Unlike Denominators Worksheets

## TIME SAVING

- No Prep - just print and go
- Solutions included
- Worksheets are numbered at the bottom so you can find solutions fast

## SAVE INK

- No fancy borders

## VERSATILE USE

- Homework
- Classwork
- Intervention
- Early finishers
- Use for sub lessons

## DIFFERENTIATED

- Students can focus on adding or subtracting in isolation
- Students can practice with a mix of adding and subtracting
- 4 sets of the worksheets have denominators where one is a multiple of the other to help students see how to find the common denominator.
- 3 problem solving adding and subtracting fractions pyramids for early finishers or students that excel.

## HIGH VOLUME

- At least 12 calculations for students to complete on each page
- So much practice for your students with 6 different sheets per section each with different problems

## What is included?

12 Questions on each page with all solutions included

6 x adding fractions where one denominator is a multiple of the other

6 x adding fractions with unlike denominators

6 x subtracting fractions where one denominator is a multiple of the other

6 x subtracting fractions with unlike denominators

6 x adding and subtracting fractions where one denominator is a multiple of the other

6 x adding and subtracting fractions with unlike denominators

Bonus problem solving pyramid worksheet

3 x adding and subtracting fractions with unlike denominators

# Adding and Subtracting Fractions with Unlike Denominators Worksheets

## 6 x adding fractions where one denominator is a multiple of the other

Worksheet 1: Adding fractions where one denominator is a multiple of the other.

1)  $\frac{1}{2} + \frac{1}{4} = \frac{2}{4} + \frac{1}{4} = \frac{3}{4}$

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

3)  $\frac{1}{5} + \frac{1}{10} = \frac{2}{10} + \frac{1}{10} = \frac{3}{10}$

4)  $\frac{1}{8} + \frac{1}{16} = \frac{2}{16} + \frac{1}{16} = \frac{3}{16}$

5)  $\frac{1}{9} + \frac{1}{18} = \frac{2}{18} + \frac{1}{18} = \frac{3}{18} = \frac{1}{6}$

6)  $\frac{1}{12} + \frac{1}{24} = \frac{2}{24} + \frac{1}{24} = \frac{3}{24} = \frac{1}{8}$

7)  $\frac{1}{15} + \frac{1}{30} = \frac{2}{30} + \frac{1}{30} = \frac{3}{30} = \frac{1}{10}$

8)  $\frac{1}{20} + \frac{1}{40} = \frac{2}{40} + \frac{1}{40} = \frac{3}{40}$

9)  $\frac{1}{25} + \frac{1}{50} = \frac{2}{50} + \frac{1}{50} = \frac{3}{50}$

10)  $\frac{1}{30} + \frac{1}{60} = \frac{2}{60} + \frac{1}{60} = \frac{3}{60} = \frac{1}{20}$

11)  $\frac{1}{36} + \frac{1}{72} = \frac{2}{72} + \frac{1}{72} = \frac{3}{72} = \frac{1}{24}$

12)  $\frac{1}{40} + \frac{1}{80} = \frac{2}{80} + \frac{1}{80} = \frac{3}{80}$

13)  $\frac{1}{45} + \frac{1}{90} = \frac{2}{90} + \frac{1}{90} = \frac{3}{90} = \frac{1}{30}$

14)  $\frac{1}{50} + \frac{1}{100} = \frac{2}{100} + \frac{1}{100} = \frac{3}{100}$

15)  $\frac{1}{60} + \frac{1}{120} = \frac{2}{120} + \frac{1}{120} = \frac{3}{120} = \frac{1}{40}$

16)  $\frac{1}{70} + \frac{1}{140} = \frac{2}{140} + \frac{1}{140} = \frac{3}{140}$

17)  $\frac{1}{80} + \frac{1}{160} = \frac{2}{160} + \frac{1}{160} = \frac{3}{160}$

18)  $\frac{1}{90} + \frac{1}{180} = \frac{2}{180} + \frac{1}{180} = \frac{3}{180} = \frac{1}{60}$

19)  $\frac{1}{100} + \frac{1}{200} = \frac{2}{200} + \frac{1}{200} = \frac{3}{200}$

20)  $\frac{1}{120} + \frac{1}{240} = \frac{2}{240} + \frac{1}{240} = \frac{3}{240} = \frac{1}{80}$

## 6 x subtracting fractions where one denominator is a multiple of the other

Worksheet 1: Subtracting fractions where one denominator is a multiple of the other.

1)  $\frac{1}{2} - \frac{1}{4} = \frac{2}{4} - \frac{1}{4} = \frac{1}{4}$

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

3)  $\frac{1}{5} - \frac{1}{10} = \frac{2}{10} - \frac{1}{10} = \frac{1}{10}$

4)  $\frac{1}{8} - \frac{1}{16} = \frac{2}{16} - \frac{1}{16} = \frac{1}{16}$

5)  $\frac{1}{9} - \frac{1}{18} = \frac{2}{18} - \frac{1}{18} = \frac{1}{18}$

6)  $\frac{1}{12} - \frac{1}{24} = \frac{2}{24} - \frac{1}{24} = \frac{1}{24}$

7)  $\frac{1}{15} - \frac{1}{30} = \frac{2}{30} - \frac{1}{30} = \frac{1}{30}$

8)  $\frac{1}{20} - \frac{1}{40} = \frac{2}{40} - \frac{1}{40} = \frac{1}{40}$

9)  $\frac{1}{25} - \frac{1}{50} = \frac{2}{50} - \frac{1}{50} = \frac{1}{50}$

10)  $\frac{1}{30} - \frac{1}{60} = \frac{2}{60} - \frac{1}{60} = \frac{1}{60}$

11)  $\frac{1}{36} - \frac{1}{72} = \frac{2}{72} - \frac{1}{72} = \frac{1}{72}$

12)  $\frac{1}{40} - \frac{1}{80} = \frac{2}{80} - \frac{1}{80} = \frac{1}{80}$

13)  $\frac{1}{45} - \frac{1}{90} = \frac{2}{90} - \frac{1}{90} = \frac{1}{90}$

14)  $\frac{1}{50} - \frac{1}{100} = \frac{2}{100} - \frac{1}{100} = \frac{1}{100}$

15)  $\frac{1}{60} - \frac{1}{120} = \frac{2}{120} - \frac{1}{120} = \frac{1}{120}$

16)  $\frac{1}{70} - \frac{1}{140} = \frac{2}{140} - \frac{1}{140} = \frac{1}{140}$

17)  $\frac{1}{80} - \frac{1}{160} = \frac{2}{160} - \frac{1}{160} = \frac{1}{160}$

18)  $\frac{1}{90} - \frac{1}{180} = \frac{2}{180} - \frac{1}{180} = \frac{1}{180}$

19)  $\frac{1}{100} - \frac{1}{200} = \frac{2}{200} - \frac{1}{200} = \frac{1}{200}$

20)  $\frac{1}{120} - \frac{1}{240} = \frac{2}{240} - \frac{1}{240} = \frac{1}{240}$

## 6 x adding or subtracting fractions where one denominator is a multiple of the other

Worksheet 1: Adding and subtracting fractions where one denominator is a multiple of the other.

1)  $\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$

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

3)  $\frac{1}{5} + \frac{1}{10} = \frac{3}{10}$

4)  $\frac{1}{8} - \frac{1}{16} = \frac{1}{16}$

5)  $\frac{1}{9} + \frac{1}{18} = \frac{2}{9}$

6)  $\frac{1}{12} - \frac{1}{24} = \frac{1}{24}$

7)  $\frac{1}{15} + \frac{1}{30} = \frac{3}{30} = \frac{1}{10}$

8)  $\frac{1}{20} - \frac{1}{40} = \frac{1}{40}$

9)  $\frac{1}{25} + \frac{1}{50} = \frac{3}{50}$

10)  $\frac{1}{30} - \frac{1}{60} = \frac{1}{60}$

11)  $\frac{1}{36} + \frac{1}{72} = \frac{3}{72} = \frac{1}{24}$

12)  $\frac{1}{40} - \frac{1}{80} = \frac{1}{80}$

13)  $\frac{1}{45} + \frac{1}{90} = \frac{3}{90} = \frac{1}{30}$

14)  $\frac{1}{50} - \frac{1}{100} = \frac{1}{100}$

15)  $\frac{1}{60} + \frac{1}{120} = \frac{3}{120} = \frac{1}{40}$

16)  $\frac{1}{70} - \frac{1}{140} = \frac{1}{140}$

17)  $\frac{1}{80} + \frac{1}{160} = \frac{3}{160}$

18)  $\frac{1}{90} - \frac{1}{180} = \frac{1}{180}$

19)  $\frac{1}{100} + \frac{1}{200} = \frac{3}{200}$

20)  $\frac{1}{120} - \frac{1}{240} = \frac{1}{240}$

## 6 x adding fractions with unlike denominators

Worksheet 1: Adding fractions with unlike denominators.

1)  $\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

2)  $\frac{1}{3} + \frac{1}{4} = \frac{4}{12} + \frac{3}{12} = \frac{7}{12}$

3)  $\frac{1}{4} + \frac{1}{5} = \frac{5}{20} + \frac{4}{20} = \frac{9}{20}$

4)  $\frac{1}{5} + \frac{1}{6} = \frac{6}{30} + \frac{5}{30} = \frac{11}{30}$

5)  $\frac{1}{6} + \frac{1}{7} = \frac{7}{42} + \frac{6}{42} = \frac{13}{42}$

6)  $\frac{1}{7} + \frac{1}{8} = \frac{8}{56} + \frac{7}{56} = \frac{15}{56}$

7)  $\frac{1}{8} + \frac{1}{9} = \frac{9}{72} + \frac{8}{72} = \frac{17}{72}$

8)  $\frac{1}{9} + \frac{1}{10} = \frac{10}{90} + \frac{9}{90} = \frac{19}{90}$

9)  $\frac{1}{10} + \frac{1}{11} = \frac{11}{110} + \frac{10}{110} = \frac{21}{110}$

10)  $\frac{1}{11} + \frac{1}{12} = \frac{12}{132} + \frac{11}{132} = \frac{23}{132}$

11)  $\frac{1}{12} + \frac{1}{13} = \frac{13}{156} + \frac{12}{156} = \frac{25}{156}$

12)  $\frac{1}{13} + \frac{1}{14} = \frac{14}{182} + \frac{13}{182} = \frac{27}{182}$

13)  $\frac{1}{14} + \frac{1}{15} = \frac{15}{210} + \frac{14}{210} = \frac{29}{210}$

14)  $\frac{1}{15} + \frac{1}{16} = \frac{16}{240} + \frac{15}{240} = \frac{31}{240}$

15)  $\frac{1}{16} + \frac{1}{17} = \frac{17}{272} + \frac{16}{272} = \frac{33}{272}$

16)  $\frac{1}{17} + \frac{1}{18} = \frac{18}{306} + \frac{17}{306} = \frac{35}{306}$

17)  $\frac{1}{18} + \frac{1}{19} = \frac{19}{342} + \frac{18}{342} = \frac{37}{342}$

18)  $\frac{1}{19} + \frac{1}{20} = \frac{20}{380} + \frac{19}{380} = \frac{39}{380}$

19)  $\frac{1}{20} + \frac{1}{21} = \frac{21}{420} + \frac{20}{420} = \frac{41}{420}$

20)  $\frac{1}{21} + \frac{1}{22} = \frac{22}{462} + \frac{21}{462} = \frac{43}{462}$

## 6 x subtracting fractions with unlike denominators

Worksheet 1: Subtracting fractions with unlike denominators.

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

2)  $\frac{1}{3} - \frac{1}{4} = \frac{4}{12} - \frac{3}{12} = \frac{1}{12}$

3)  $\frac{1}{4} - \frac{1}{5} = \frac{5}{20} - \frac{4}{20} = \frac{1}{20}$

4)  $\frac{1}{5} - \frac{1}{6} = \frac{6}{30} - \frac{5}{30} = \frac{1}{30}$

5)  $\frac{1}{6} - \frac{1}{7} = \frac{7}{42} - \frac{6}{42} = \frac{1}{42}$

6)  $\frac{1}{7} - \frac{1}{8} = \frac{8}{56} - \frac{7}{56} = \frac{1}{56}$

7)  $\frac{1}{8} - \frac{1}{9} = \frac{9}{72} - \frac{8}{72} = \frac{1}{72}$

8)  $\frac{1}{9} - \frac{1}{10} = \frac{10}{90} - \frac{9}{90} = \frac{1}{90}$

9)  $\frac{1}{10} - \frac{1}{11} = \frac{11}{110} - \frac{10}{110} = \frac{1}{110}$

10)  $\frac{1}{11} - \frac{1}{12} = \frac{12}{132} - \frac{11}{132} = \frac{1}{132}$

11)  $\frac{1}{12} - \frac{1}{13} = \frac{13}{156} - \frac{12}{156} = \frac{1}{156}$

12)  $\frac{1}{13} - \frac{1}{14} = \frac{14}{182} - \frac{13}{182} = \frac{1}{182}$

13)  $\frac{1}{14} - \frac{1}{15} = \frac{15}{210} - \frac{14}{210} = \frac{1}{210}$

14)  $\frac{1}{15} - \frac{1}{16} = \frac{16}{240} - \frac{15}{240} = \frac{1}{240}$

15)  $\frac{1}{16} - \frac{1}{17} = \frac{17}{272} - \frac{16}{272} = \frac{1}{272}$

16)  $\frac{1}{17} - \frac{1}{18} = \frac{18}{306} - \frac{17}{306} = \frac{1}{306}$

17)  $\frac{1}{18} - \frac{1}{19} = \frac{19}{342} - \frac{18}{342} = \frac{1}{342}$

18)  $\frac{1}{19} - \frac{1}{20} = \frac{20}{380} - \frac{19}{380} = \frac{1}{380}$

19)  $\frac{1}{20} - \frac{1}{21} = \frac{21}{420} - \frac{20}{420} = \frac{1}{420}$

20)  $\frac{1}{21} - \frac{1}{22} = \frac{22}{462} - \frac{21}{462} = \frac{1}{462}$

## 6 x adding and subtracting fractions with unlike denominators

Worksheet 1: Adding and subtracting fractions with unlike denominators.

1)  $\frac{1}{2} + \frac{1}{3} = \frac{5}{6}$

2)  $\frac{1}{3} - \frac{1}{4} = \frac{1}{12}$

3)  $\frac{1}{4} + \frac{1}{5} = \frac{9}{20}$

4)  $\frac{1}{5} - \frac{1}{6} = \frac{1}{30}$

5)  $\frac{1}{6} + \frac{1}{7} = \frac{13}{42}$

6)  $\frac{1}{7} - \frac{1}{8} = \frac{1}{56}$

7)  $\frac{1}{8} + \frac{1}{9} = \frac{17}{72}$

8)  $\frac{1}{9} - \frac{1}{10} = \frac{1}{90}$

9)  $\frac{1}{10} + \frac{1}{11} = \frac{21}{110}$

10)  $\frac{1}{11} - \frac{1}{12} = \frac{1}{132}$

11)  $\frac{1}{12} + \frac{1}{13} = \frac{25}{156}$

12)  $\frac{1}{13} - \frac{1}{14} = \frac{1}{182}$

13)  $\frac{1}{14} + \frac{1}{15} = \frac{29}{210}$

14)  $\frac{1}{15} - \frac{1}{16} = \frac{1}{240}$

15)  $\frac{1}{16} + \frac{1}{17} = \frac{33}{272}$

16)  $\frac{1}{17} - \frac{1}{18} = \frac{1}{306}$

17)  $\frac{1}{18} + \frac{1}{19} = \frac{37}{342}$

18)  $\frac{1}{19} - \frac{1}{20} = \frac{1}{380}$

19)  $\frac{1}{20} + \frac{1}{21} = \frac{41}{420}$

20)  $\frac{1}{21} - \frac{1}{22} = \frac{1}{462}$

## 3 x problem solving pyramid worksheets

Each pair of boxes add up to the box above it. Students have to add or subtract to fill in the blanks.

1)  $\frac{1}{4} + \frac{5}{6} = \frac{6}{8}$

2)  $\frac{109}{44} + \frac{8}{11} = \frac{119}{88}$

3)  $\frac{23}{15} + \frac{1}{6} = \frac{2}{3}$

The fractions increase in difficulty from Worksheet 1 to Worksheet 3.

Worksheet 1: Problem solving pyramid.

1)  $\frac{1}{4} + \frac{5}{6} = \frac{6}{8}$

2)  $\frac{109}{44} + \frac{8}{11} = \frac{119}{88}$

3)  $\frac{23}{15} + \frac{1}{6} = \frac{2}{3}$

4)  $\frac{1}{3} + \frac{5}{9} = \frac{4}{3}$

5)  $\frac{1}{2} + \frac{3}{11} = \frac{17}{22}$

6)  $\frac{49}{30} + \frac{5}{10} = \frac{3}{2}$

Worksheet 2: Problem solving pyramid.

1)  $\frac{1}{4} + \frac{5}{9} = \frac{6}{9}$

2)  $\frac{7}{8} + \frac{7}{6} = \frac{27}{24}$

3)  $\frac{2}{4} + \frac{1}{3} = \frac{5}{6}$

4)  $\frac{83}{10} + \frac{3}{2} = \frac{92}{5}$

5)  $\frac{13}{14} + \frac{2}{8} = \frac{29}{28}$

6)  $\frac{49}{22} + \frac{8}{11} = \frac{65}{22}$

Worksheet 3: Problem solving pyramid.

1)  $\frac{1}{4} + \frac{5}{9} = \frac{6}{9}$

2)  $\frac{1}{2} + \frac{7}{9} = \frac{16}{18}$

3)  $\frac{14}{9} + \frac{13}{18} = \frac{43}{18}$

4)  $\frac{2}{6} + \frac{6}{10} = \frac{4}{5}$

5)  $\frac{2}{7} + \frac{3}{10} = \frac{32}{70}$

6)  $\frac{1}{3} + \frac{4}{10} = \frac{14}{30}$

# Adding and Subtracting Fractions with Unlike Denominators Worksheets

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