

Adding and Subtracting Fractions: practice solutions, Grade 4 – download the PDF

Written solutions to the chapter problems. Check each step, then correct yourself.

1 Unit fractions



a) $\frac{5}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$, five copies of $\frac{1}{8}$.

b) For example $\frac{5}{8} = \frac{2}{8} + \frac{3}{8}$ and $\frac{5}{8} = \frac{4}{8} + \frac{1}{8}$. Any two numerators that add to 5 work.

2 Adding like fractions



Add the numerators and keep the denominator.

a) $\frac{7}{10}$ b) $\frac{7}{9}$ c) $\frac{5}{6}$ d) $\frac{8}{12}$

3 Subtracting like fractions



Subtract the numerators and keep the denominator.

a) $\frac{4}{8}$ b) $\frac{3}{10}$ c) $\frac{4}{6}$ d) $\frac{7}{12}$

4**Improper fractions to mixed numbers**

Divide the numerator by the denominator.

a) $7 \div 4 = 1 \text{ r } 3$, so $1\frac{3}{4}$.

b) $11 \div 5 = 2 \text{ r } 1$, so $2\frac{1}{5}$.

c) $9 \div 2 = 4 \text{ r } 1$, so $4\frac{1}{2}$.

d) $10 \div 3 = 3 \text{ r } 1$, so $3\frac{1}{3}$.

5**Mixed numbers to improper fractions**

Multiply the whole number by the denominator, then add the numerator.

a) $1 \times 3 + 2 = 5$, so $\frac{5}{3}$.

b) $2 \times 4 + 1 = 9$, so $\frac{9}{4}$.

c) $3 \times 5 + 3 = 18$, so $\frac{18}{5}$.

d) $2 \times 6 + 5 = 17$, so $\frac{17}{6}$.

6**Pizza party**

a) $\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$. They ate $\frac{5}{8}$ of the pizza.

b) The whole pizza is $\frac{8}{8}$, so $\frac{8}{8} - \frac{5}{8} = \frac{3}{8}$. $\frac{3}{8}$ of the pizza is left.

7 True or false?



- a) False. The denominator stays 5: $\frac{3}{5} + \frac{2}{5} = \frac{5}{5} = 1$.
- b) True. Four copies of $\frac{1}{7}$ make $\frac{4}{7}$.
- c) True. Six sixths make one whole.

8 Missing numbers



- a) $8 - 4 = 4$, so $\frac{4}{9}$.
- b) $11 - 5 = 6$, so $\frac{6}{12}$.
- c) $1 = \frac{7}{7}$ and $7 - 3 = 4$, so $\frac{4}{7}$.
- d) $1 = \frac{8}{8}$ and $8 - 3 = 5$, so $\frac{5}{8}$.

9 Adding mixed numbers



- a) Wholes $2 + 1 = 3$, fractions $\frac{3}{5}$. Answer $3\frac{3}{5}$.
- b) 5 and $\frac{7}{8}$. Answer $5\frac{7}{8}$.
- c) Wholes 3, fractions $\frac{8}{6} = 1\frac{2}{6}$. Answer $4\frac{2}{6}$.
- d) Wholes 5, fractions $\frac{13}{10} = 1\frac{3}{10}$. Answer $6\frac{3}{10}$.

10 Subtracting mixed numbers



a) $3\frac{4}{7}$.

b) $3\frac{2}{9}$.

c) Write $6 = 5\frac{4}{4}$. Then $5\frac{4}{4} - 2\frac{1}{4} = 3\frac{3}{4}$.

d) Regroup: $5\frac{1}{5} = 4\frac{6}{5}$. Then $4\frac{6}{5} - 2\frac{3}{5} = 2\frac{3}{5}$.

11 Whole number times a fraction



a) $\frac{6}{5} = 1\frac{1}{5}$.

b) $\frac{12}{8} = 1\frac{4}{8}$.

c) $\frac{5}{6}$.

d) $\frac{12}{3} = 4$.

12 Flour for cookies



$$3 \times \frac{3}{4} = \frac{9}{4} = 2\frac{1}{4}.$$

You need $2\frac{1}{4}$ cups of flour.

13 A day on the trail



Wholes: $2 + 1 = 3$. Fractions: $\frac{3}{10} + \frac{8}{10} = \frac{11}{10} = 1\frac{1}{10}$.

Total: $3 + 1\frac{1}{10} = 4\frac{1}{10}$. The hiker walked $4\frac{1}{10}$ miles (about 6.6 kilometers).

14 Find the mistake

a) Sam added the denominators too. The parts are still ninths, so the denominator must stay 9.

b) $\frac{4}{9} + \frac{3}{9} = \frac{7}{9}$.

15 Many ways to break up a number

a) $2\frac{3}{4} = 2 + \frac{3}{4}$.

b) $2\frac{3}{4} = \frac{11}{4}$. Two ways: $\frac{5}{4} + \frac{6}{4}$ and $\frac{8}{4} + \frac{3}{4}$. Any numerators that add to 11 work.

c) $2\frac{3}{4} = \frac{11}{4} = 11 \times \frac{1}{4}$.

16 The rain barrel

a) Wholes $2 + 1 = 3$; fractions $\frac{3}{4} + \frac{2}{4} = \frac{5}{4} = 1\frac{1}{4}$. Total $4\frac{1}{4}$ gallons.

b) $8\frac{1}{4} - 4\frac{1}{4} = 4$. The barrel has 4 gallons left (about 15 liters).

17 Shelves

a) $7 \times \frac{3}{4} = \frac{21}{4} = 5\frac{1}{4}$ yards.

b) $6 = 5\frac{4}{4}$, and $5\frac{4}{4} - 5\frac{1}{4} = \frac{3}{4}$. Yes, the plank is long enough and $\frac{3}{4}$ yard is left over.

18 Who ran farther?

Dana: $4 \times \frac{3}{5} = \frac{12}{5} = 2\frac{2}{5}$ miles.

Eli ran $2\frac{4}{5}$ miles and $2\frac{4}{5} - 2\frac{2}{5} = \frac{2}{5}$.

Eli ran farther, by $\frac{2}{5}$ mile.

19 Reading a number line

a) A is at $1\frac{1}{4} = \frac{5}{4}$, B is at $2\frac{1}{4} = \frac{9}{4}$, C is at $2\frac{3}{4} = \frac{11}{4}$.

b) $\frac{9}{4} - \frac{5}{4} = \frac{4}{4} = 1$. A and B are 1 unit apart.

$\frac{11}{4} - \frac{9}{4} = \frac{2}{4}$. B and C are $\frac{2}{4}$ of a unit apart.

20 Mystery number

Work backward by adding: $1\frac{4}{6} + 1\frac{5}{6}$. Wholes $1 + 1 = 2$; fractions $\frac{4}{6} + \frac{5}{6} = \frac{9}{6} = 1\frac{3}{6}$.

Total $3\frac{3}{6}$, which is between 3 and 4. Check: $3\frac{3}{6} - 1\frac{5}{6} = 2\frac{9}{6} - 1\frac{5}{6} = 1\frac{4}{6}$. I am $3\frac{3}{6}$.

21 Is it 15 eighteenths?

a) The parts are still sixths. Multiplying by a whole number counts more sixths, it does not change their size, so the denominator stays 6. Also $\frac{15}{18}$ is less than 1, but 3 groups of $\frac{5}{6}$ are clearly more than 2 wholes.

b) $3 \times \frac{5}{6} = \frac{15}{6} = 2\frac{3}{6}$.



Test yourself: quick challenge for Grade 4

[Change level](#)

Level : **Grade 4**

6 random questions, instant feedback.



Start the challenge



Keep exploring with Zyro



Math practice

Adding and Subtracting Fractions: math practice, Grade 4



Math quizzes

Adding and Subtracting Fractions: math quiz, Grade 4



Math tests



Math practice

Adding and Subtracting Fractions: math test, Grade 4

Decimal Fractions and Decimals: math practice, Grade 4

 **Math practice**

Measurement and Data: math practice, Grade 4

 **Math quizzes**

Decimal Fractions and Decimals: math quiz, Grade 4

Zyro vous emmène sur nos sites partenaires

Embarquez pour d'autres planètes du savoir et leurs applis.

Décollage