



4th  
Basic

5th  
Advanced

# Helping With Math

USA  
GRADES

## Subtraction of Proper Fractions

*Suitable for students  
aged 8-10*



This pack is suitable for learners aged 8-10 years old or 4th and 5th graders (USA). The content covers fact files and relevant basic and advanced activities involving subtraction of proper fractions.



Proper Fraction is a type of fraction whose numerator is always less than the denominator.

**Numerator < Denominator**

Example of Proper Fraction



$$\frac{4}{5}$$



$$\frac{2}{4}$$



$$\frac{7}{9}$$



$$\frac{6}{8}$$



## STEPS IN SUBTRACTING PROPER FRACTIONS



### SUBTRACTION OF PROPER FRACTIONS WITH THE SAME DENOMINATORS

Example:

$$\frac{5}{6} - \frac{1}{6}$$

STEP 1:

Make sure that the denominators of both fractions are the same.

$$\frac{5}{6} - \frac{1}{6}$$



Denominators are the same.

STEP 2:

Subtract the numerators and copy the denominator.

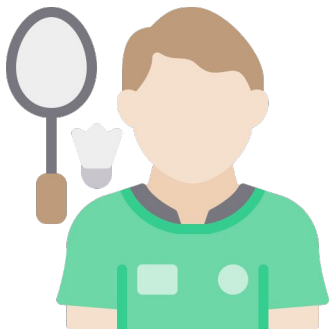
$$\frac{5 - 1}{6} = \frac{4}{6}$$



STEP 3:

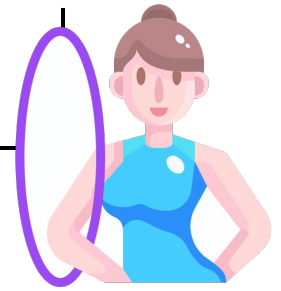
Simplify the answer if necessary.

$$\frac{4 \div 2}{6 \div 2} = \frac{2}{3}$$



# STEPS IN SUBTRACTING PROPER FRACTIONS

## SUBTRACTION OF PROPER FRACTIONS WITH THE DIFFERENT DENOMINATORS



Example:

$$\frac{4}{6} - \frac{2}{4}$$

STEP 1:

Check if the denominators of the fractions are different from one another.

$$\frac{4}{\textcircled{6}} - \frac{2}{\textcircled{4}}$$



Denominators are not the same.

STEP 2:

Find the least common multiple (LCM) of the denominator.



$$\begin{array}{l} 6 - 6, \textcircled{12}, 18 \\ 4 - 4, 8, \textcircled{12} \end{array}$$

STEP 3:

Subtract the numerators and use the LCM as the denominator.

$$\frac{4 - 2}{12} = \frac{2}{12}$$

STEP 4:

Simplify the fraction if necessary.

$$\frac{2 \div 2}{12 \div 2} = \frac{\textcircled{1}}{\textcircled{6}}$$



# LET'S PRACTICE!

1.)

$$\frac{4}{6} - \frac{1}{6}$$

2.)

$$\frac{4}{5} - \frac{1}{3}$$



3.)

$$\frac{3}{8} - \frac{2}{8}$$

4.)

$$\frac{6}{7} - \frac{2}{5}$$



5.)

$$\frac{5}{9} - \frac{3}{9}$$

6.)

$$\frac{3}{4} - \frac{2}{3}$$



7.)

$$\frac{3}{4} - \frac{1}{4}$$

8.)

$$\frac{2}{8} - \frac{1}{6}$$



# TABLE OF ACTIVITIES

| <b>Ages 8-9</b> (Basic)     |                            | <u>4th Grade</u> |
|-----------------------------|----------------------------|------------------|
| 1                           | Opening Ceremony           |                  |
| 2                           | Olympic Games 2020         |                  |
| 3                           | Table Tennis               |                  |
| 4                           | Weightlifting              |                  |
| 5                           | Fencing Equipment and Gear |                  |
| <b>Ages 9-10</b> (Advanced) |                            | <u>5th Grade</u> |
| 6                           | Let's Play Basketball      |                  |
| 7                           | Swimming Competition       |                  |
| 8                           | Archery Training           |                  |
| 9                           | Boxing Gloves              |                  |
| 10                          | Entry Tickets              |                  |



# OPENING CEREMONY

G4  
Basic

The opening ceremony of the Olympic Games will be held next week. To watch the ceremony, subtract the following proper fractions. Show your solution on the space provided.

1

$$\frac{3}{4} - \frac{2}{4} =$$



2



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

3

$$\frac{4}{5} - \frac{2}{5} =$$



4

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



# OLYMPIC GAMES 2020

G4  
Basic

Where is the venue of Olympic Games 2020? To know the answer, subtract the following proper fractions. Write the letter of your answer inside the box and show your solutions on the space provided.

1  $\frac{2}{5} - \frac{1}{5} =$

O.)  $\frac{2}{5}$

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

T.)  $\frac{1}{5}$

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

Y.)  $\frac{1}{4}$

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

A.)  $\frac{3}{4}$

5  $\frac{4}{5} - \frac{2}{5} =$

O.)  $\frac{1}{2}$

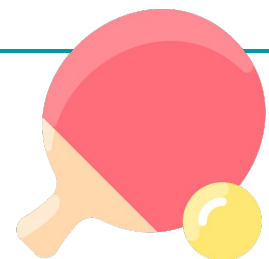
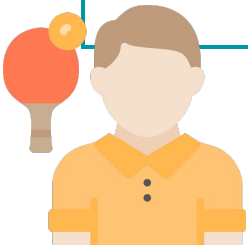


# TABLE TENNIS

G4  
Basic

To be able to join the table tennis competition, answer the following word problems. State whether the statement is true or false. Show your solution to prove your answer.

| STATEMENT   | TRUE/FALSE | SOLUTION |
|---|------------|----------|
| 1.) When we subtract $\frac{1}{4}$ from $\frac{3}{4}$ , the answer is $\frac{1}{2}$ . |            |          |
| 2.) The difference of $\frac{2}{5}$ and $\frac{1}{5}$ is $\frac{3}{5}$ .              |            |          |
| 3.) When we subtract $\frac{1}{3}$ from $\frac{2}{3}$ , the answer is $\frac{1}{3}$ . |            |          |
| 4.) When we subtract $\frac{2}{5}$ from $\frac{4}{5}$ , the answer is $\frac{2}{5}$ . |            |          |
| 5.) The difference of $\frac{3}{4}$ and $\frac{1}{4}$ is $\frac{1}{4}$ .              |            |          |





# WEIGHTLIFTING

G4  
Basic

Train for the weightlifting competition by answering the following. Find the difference of the following proper fractions. Write your answers and solutions on the space provided.

1

$$\frac{4}{5} - \frac{1}{2} =$$



2

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



3

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



4

$$\frac{4}{5} - \frac{1}{2} =$$



# FENCING EQUIPMENT AND GEAR

G4  
Basic

The fencing equipment and gear below will be yours if you managed to subtract the following proper fractions. Show your solution on the space provided.

1

$$\frac{2}{5} - \frac{1}{5}$$

2

$$\frac{3}{4} - \frac{1}{4}$$

3

$$\frac{2}{3} - \frac{1}{3}$$

4

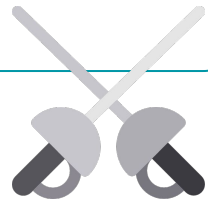
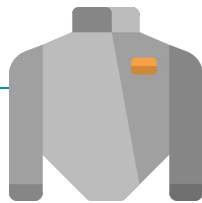
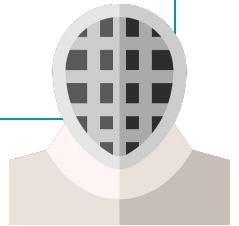
$$\frac{4}{5} - \frac{1}{5}$$

5

$$\frac{2}{5} - \frac{1}{4}$$

6

$$\frac{1}{3} - \frac{1}{2}$$



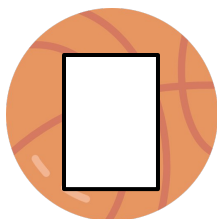
# LET'S PLAY BASKETBALL

G5  
Advanced

Choose the ball that you will use in your basketball training by subtracting the following proper fractions. Write your answers inside the ball and show your solutions on the space provided.

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

=

A large, empty rectangular box with a yellow border, intended for the student to show their work or solution.

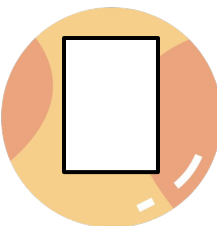
2  $\frac{7}{8} - \frac{5}{8}$

=

A large, empty rectangular box with a dashed yellow border, intended for the student to show their work or solution.

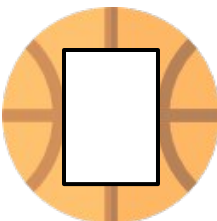
3  $\frac{5}{9} - \frac{3}{9}$

=

A large, empty rectangular box with a yellow border, intended for the student to show their work or solution.

4  $\frac{4}{7} - \frac{1}{7}$

=

A large, empty rectangular box with a dashed yellow border, intended for the student to show their work or solution.

# SWIMMING COMPETITION

G5  
Advanced

It's your swimming competition day! Answer the following until you reach the finish line. Write your solution on the space provided.

START

$$\frac{7}{8} - \frac{2}{8} =$$

1

FINISH

$$\frac{7}{10} - \frac{5}{10} =$$

5

$$\frac{2}{7} - \frac{1}{7} =$$

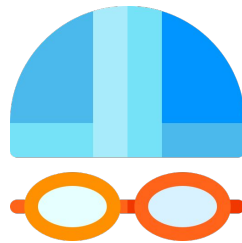
2

$$\frac{4}{9} - \frac{3}{9} =$$

4

$$\frac{4}{6} - \frac{2}{6} =$$

3



# ARCHERY TRAINING

G5  
Advanced

Archery is one of the events in the olympic games. Train your archery skills by answering the following. Subtract the given proper fractions below. Write the letter of your answer inside the circle and show your solution on the space provided.

a.)  $\frac{3}{8}$

c.)  $\frac{1}{2}$

e.)  $\frac{1}{3}$

b.)  $\frac{3}{10}$

d.)  $\frac{2}{9}$

f.)  $\frac{3}{7}$

1.)

$$\frac{5}{6} - \frac{2}{6}$$



2.)

$$\frac{7}{8} - \frac{4}{8}$$



3.)

$$\frac{4}{7} - \frac{1}{7}$$



4.)

$$\frac{3}{9} - \frac{1}{9}$$



5.)

$$\frac{4}{6} - \frac{2}{6}$$



6.)

$$\frac{6}{10} - \frac{3}{10}$$



# BOXING GLOVES

G5  
Advanced

The boxing gloves below will be yours if you managed to find the difference of the given proper fractions. Show your solution on the space provided.

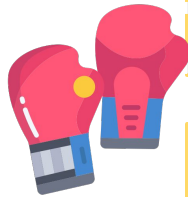
1  $\frac{5}{6} - \frac{1}{4} =$ 

|  |
|--|
|  |
|  |



2  $\frac{4}{7} - \frac{1}{3} =$ 

|  |
|--|
|  |
|  |



3  $\frac{4}{8} - \frac{2}{6} =$ 

|  |
|--|
|  |
|  |

4  $\frac{7}{9} - \frac{1}{2} =$ 

|  |
|--|
|  |
|  |



# ENTRY TICKETS

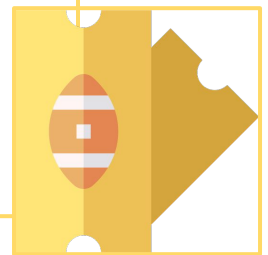
G5  
Advanced

The Olympics Games 2021 is fast approaching. To get free tickets to the games, solve the following word problems. Show your solution on the space provided.



1.) Anna plans to make a banner for her volleyball team. She bought  $\frac{8}{9}$  yards of cloth but she just used  $\frac{6}{9}$  yards. How many yards of cloth were left?

2.) Kelvin needs to jog for  $\frac{7}{8}$  hours as part of his daily training but he just jogged for  $\frac{5}{8}$  hours. How many more hours does he still need to jog?



3.) Gina is an athlete and her nutritionist advised that she should eat  $\frac{3}{4}$  of watermelon a day. If she already ate  $\frac{1}{2}$  today, what fraction of the watermelon should she eat?



# ANSWER GUIDE

## Activity 1

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

$$3.) \frac{4}{5} - \frac{2}{5} = \frac{4-2}{5} = \frac{2}{5}$$

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

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

## Activity 2

$$1.) \frac{2}{5} - \frac{1}{5} = \frac{2-1}{5} = \frac{1}{5} \text{ T}$$

$$3.) \frac{4}{5} - \frac{1}{5} = \frac{4-1}{5} = \frac{3}{5} \text{ K}$$

$$2.) \frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4} = \frac{1}{2} \text{ O}$$

$$4.) \frac{2}{4} - \frac{1}{4} = \frac{2-1}{4} = \frac{1}{4} \text{ Y}$$

$$5.) \frac{4}{5} - \frac{2}{5} = \frac{4-2}{5} = \frac{2}{5} \text{ O}$$

## Activity 3

$$1.) \frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4} = \frac{1}{2} \text{ true}$$

$$3.) \frac{2}{3} - \frac{1}{3} = \frac{2-1}{3} = \frac{1}{3} \text{ true}$$

$$2.) \frac{2}{5} - \frac{1}{5} = \frac{2-1}{5} = \frac{1}{5} \text{ false}$$

$$4.) \frac{4}{5} - \frac{2}{5} = \frac{4-2}{5} = \frac{2}{5} \text{ true}$$

$$5.) \frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4} = \frac{1}{2} \text{ false}$$

## Activity 4

$$1.) \frac{4}{5} - \frac{1}{2} = \frac{4(2) - 1(5)}{10} = \frac{3}{10}$$

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

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

$$4.) \frac{4}{5} - \frac{1}{2} = \frac{4(2) - 1(5)}{10} = \frac{3}{10}$$





# ANSWER GUIDE

## Activity 5

$$\begin{array}{ll} 1.) \frac{2}{5} - \frac{1}{5} = \frac{2-1}{5} = \frac{1}{5} & 4.) \frac{4}{5} - \frac{1}{5} = \frac{4-1}{5} = \frac{3}{5} \\ 2.) \frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4} = \frac{1}{2} & 5.) \frac{2}{5} - \frac{1}{4} = \frac{2(4) - 1(5)}{20} = \frac{3}{20} \\ 3.) \frac{2}{3} - \frac{1}{3} = \frac{2-1}{3} = \frac{1}{3} & 6.) \frac{1}{3} - \frac{1}{4} = \frac{1(4) - 1(3)}{12} = \frac{1}{12} \end{array}$$

## Activity 6

$$\begin{array}{ll} 1.) \frac{3}{6} - \frac{2}{6} = \frac{3-2}{6} = \frac{1}{6} & 3.) \frac{5}{9} - \frac{3}{9} = \frac{5-3}{9} = \frac{2}{9} \\ 2.) \frac{7}{8} - \frac{5}{8} = \frac{7-5}{8} = \frac{2}{8} = \frac{1}{4} & 4.) \frac{4}{7} - \frac{1}{7} = \frac{4-1}{7} = \frac{3}{7} \end{array}$$

## Activity 7

$$\begin{array}{ll} 1.) \frac{7}{8} - \frac{2}{8} = \frac{7-2}{8} = \frac{5}{8} & 3.) \frac{4}{6} - \frac{2}{6} = \frac{4-2}{6} = \frac{2}{6} = \frac{1}{3} \\ 2.) \frac{2}{7} - \frac{1}{7} = \frac{2-1}{7} = \frac{1}{7} & 4.) \frac{4}{9} - \frac{3}{9} = \frac{4-3}{9} = \frac{1}{9} \\ & 5.) \frac{7}{10} - \frac{5}{10} = \frac{7-5}{10} = \frac{2}{10} = \frac{1}{5} \end{array}$$



# ANSWER GUIDE

## Activity 8

$$1.) \frac{5}{6} - \frac{2}{6} = \frac{5-2}{6} = \frac{3}{6} = \frac{1}{2} \text{ c}$$
$$4.) \frac{3}{9} - \frac{1}{9} = \frac{3-1}{9} = \frac{2}{9} \text{ d}$$
$$2.) \frac{7}{8} - \frac{4}{8} = \frac{7-4}{8} = \frac{3}{8} \text{ a}$$
$$5.) \frac{4}{6} - \frac{2}{6} = \frac{4-2}{6} = \frac{2}{6} = \frac{1}{3} \text{ e}$$
$$3.) \frac{4}{7} - \frac{1}{7} = \frac{4-1}{7} = \frac{3}{7} \text{ f}$$
$$6.) \frac{6}{10} - \frac{3}{10} = \frac{6-3}{10} = \frac{3}{10} \text{ b}$$

## Activity 9

$$1.) \frac{5}{6} - \frac{1}{4} = \frac{5(2) - 1(3)}{12} = \frac{7}{12}$$
$$3.) \frac{4}{8} - \frac{2}{6} = \frac{4(3) - 2(4)}{24} = \frac{4}{6} = \frac{2}{3}$$
$$2.) \frac{4}{7} - \frac{1}{3} = \frac{4(3) - 1(7)}{21} = \frac{5}{21}$$
$$4.) \frac{7}{9} - \frac{1}{2} = \frac{7(2) - 1(9)}{18} = \frac{5}{18}$$

## Activity 10

$$1.) \frac{8}{9} - \frac{6}{9} = \frac{8-6}{9} = \frac{2}{9} \text{ yards}$$
$$2.) \frac{7}{8} - \frac{5}{8} = \frac{7-5}{8} = \frac{2}{8} = \frac{1}{4} \text{ hours}$$
$$3.) \frac{3}{4} - \frac{1}{2} = \frac{3(1) - 1(2)}{4} = \frac{1}{4}$$



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