



PicScience Presents:

SIMPLIFYING FRACTIONS PRACTICE GUIDE



How to Make the Most of This Workbook

This little workbook is a great way to help you practice and learn to simplify fractions. A unique aspect of the design is that it will help you identify any areas that may be causing trouble with simplifying fractions.

First, you will go through the tutorial to refresh yourself and review simplifying fractions. This tutorial will help you reinforce the basic concepts so you will be ready to practice in the next sections of the workbook.

The workbook then guides you through the exercises based on your scores. You will check your answers at the end of each exercise.

For example, if you answer more than 7 correctly on the first simplifying fractions exercise, you will move to the next simplifying fractions exercise.

However, if you answer less than 7 problems correctly on the first simplifying fractions quiz, this may mean that you could benefit from some additional guidance and examples in simplifying fractions. We will want to make sure that you can solve basic division problems before we continue to give you more practice on simplifying fractions. Why? Because, to simplify fractions, you need to be able to easily complete division operations. And to successfully divide, you need to know how to multiply.


At the end of each exercise, you will be given instructions on how to proceed based on your score.

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HOW TO SIMPLIFY FRACTIONS

Tutorial

Simplifying fractions means rewriting the top and bottom numbers to the smallest possible number we can get them, without changing the value of the fraction. 

Example 1:

$$\frac{6}{8} = \frac{\cancel{2} \times 3}{\cancel{2} \times 4} = \frac{3}{4}$$

Let us start with $\frac{6}{8}$

Step 1: Simplifying the Numerator

If we work with the 6 first, we want to use factors of 6, which are 2 and 3.

Step 2: Simplifying the Denominator

Next, we want to use factors of 8, which are 2 and 4.

2 is the common factor in the top and bottom, so it cancels out.

We are left with 3 on the top and 4 on the bottom. The simplest form of

$$\frac{6}{8} \text{ is } \frac{3}{4}.$$

HOW TO SIMPLIFY FRACTIONS

Tutorial

Example 2:

$$\frac{4}{10} = \frac{\cancel{2} \times 2}{\cancel{2} \times 2} = \frac{2}{5}$$

Step 1: Simplifying the Numerator

First, let us work with the top number 4. We want to use a factor of 4, which is 2. In this case, we use 2×2 which is 4.

Step 2: Simplifying the Denominator

Next, we work with 10. We want to use factors of 10, which are 2 and 5.

2 is the common factor so it cancels out.

We are left with 2 on the top and 5 on the bottom. So, the simplest form of

$$\frac{4}{10} \text{ is } \frac{2}{5}.$$

HOW TO SIMPLIFY FRACTIONS

Tutorial

Example 3:

$$\frac{2}{4} = \frac{\cancel{2} \times 1}{\cancel{2} \times 2} = \frac{1}{2}$$

Step 1: Simplifying the Numerator

First, let us work with the top number 2. We want to use the factors of 2, which are 1 and 2.

Step 2: Simplifying the Denominator

Next, we work with 4, the bottom number. We want to use a factor of 4, which is 2.

2 is the common factor so it cancels out.

We are left with 1 as the top number and 2 as the bottom number.

So, the simplest form of $\frac{2}{4}$ is $\frac{1}{2}$.

Simplifying Fractions 1

1. $\frac{6}{12} =$

2. $\frac{2}{6} =$

3. $\frac{6}{8} =$

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

5. $\frac{2}{8} =$

6. $\frac{6}{18} =$

7. $\frac{2}{10} =$

8. $\frac{5}{20} =$

9. $\frac{6}{24} =$

10. $\frac{7}{21} =$

Simplifying Fractions 1 Solutions

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

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

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

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

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

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

7. $\frac{1}{5}$

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

9. $\frac{1}{4}$

10. $\frac{1}{3}$

***Keep score of your answers. How many did you get right and wrong?**

Option 1:

If you answered 7 or more problems correctly on Simplifying Fractions 1, skip ahead to page 19 to continue with fractions practice.

Option 2:

If you answered fewer than 7 problems correctly on Simplifying Fractions 1, go to page 10 to practice division.

Division Practice 1

1. $10 \div 2 =$

2. $15 \div 3 =$

3. $14 \div 2 =$

4. $21 \div 7 =$

5. $18 \div 2 =$

6. $12 \div 3 =$

7. $4 \div 2 =$

8. $20 \div 4 =$

9. $6 \div 3 =$

10. $27 \div 3 =$

Division Practice 1 Solutions

1. 5

2. 5

3. 7

4. 3

5. 9

6. 4

7. 2

8. 5

9. 2

10. 9

***Keep score of your answers. How many did you get right and wrong?**

Option 1:

If you answered 7 or more problems correctly on Division Practice 1, skip ahead to page 19.

Option 2:

If you answered fewer than 7 problems correctly on Division Practice 1, go to page 13 to practice multiplication.

Multiplication Practice

1. $4 \times 3 =$

2. $9 \times 2 =$

3. $5 \times 2 =$

4. $7 \times 3 =$

5. $5 \times 4 =$

6. $9 \times 6 =$

7. $2 \times 2 =$

8. $7 \times 8 =$

9. $6 \times 0 =$

10. $8 \times 6 =$

Multiplication Practice Solutions

1. 12

2. 18

3. 10

4. 21

5. 20

6. 54

7. 4

8. 56

9. 0

10. 48

***Keep score of your answers. How many did you get right and wrong?**

Option 1:

**If you answered 7 or more problems correctly on
Multiplication Practice, skip ahead to page 19.**

Option 2:

**If you answered fewer than 7 problems correctly on
Multiplication Practice, go to page 16 to practice division.**

Division Practice 2

1. $36 \div 9 =$

2. $64 \div 8 =$

3. $56 \div 8 =$

4. $54 \div 6 =$

5. $18 \div 2 =$

6. $15 \div 3 =$

7. $44 \div 4 =$

8. $63 \div 9 =$

9. $72 \div 8 =$

10. $40 \div 5 =$

Division Practice 2 Solutions

1. 4

2. 8

3. 7

4. 9

5. 9

6. 5

7. 11

8. 7

9. 9

10. 8

***Keep score of your answers. How many did you get right and wrong?**

Option 1:

If you answered 7 or more problems correctly on Division Practice 2, skip ahead to page 19 to continue practice with simplifying fractions.

Option 2:

If you answered fewer than 7 problems correctly on Division Practice 2, please practice multiplication and division.

Simplifying Fractions 2

1. $\frac{4}{44} =$

2. $\frac{5}{20} =$

3. $\frac{6}{24} =$

4. $\frac{33}{55} =$

5. $\frac{16}{32} =$

6. $\frac{5}{30} =$

7. $\frac{3}{9} =$

8. $\frac{9}{18} =$

9. $\frac{3}{27} =$

10. $\frac{4}{36} =$

Simplifying Fractions 2 Solutions

1. $\frac{1}{11}$

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

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

4. $\frac{3}{5}$

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

6. $\frac{1}{6}$

7. $\frac{1}{3}$

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

9. $\frac{1}{9}$

10. $\frac{1}{9}$

***Keep score of your answers. How many did you get right and wrong?**

Option 1:

If you answer 7 or more problems correctly on Simplifying Fractions 2, Congratulations! You are well on your way to mastering basic fractions.

Option 2:

If you answered fewer than 7 problems correctly on Simplifying Fractions 2, go to page 16 to review division.