

# Let's Get Ready for Grade 5 - Parent Guide

## Lesson 1: Add Dollars and Cents

**Objective:** To find the sum of dollar amounts using dollars and cents.

**Description:** By 4<sup>th</sup> grade the children are familiar with the standard algorithm used for addition. They also are introduced to decimals at the end of 4<sup>th</sup> grade. In this lesson they use the standard algorithm to add dollars and cents. \*Reminder... line up the decimals.

Add. \$99.46 + \$73.49

### STEP 1

Add the pennies.  
Regroup 15 pennies.

$$\begin{array}{r} \phantom{1} \\ \$ 99.46 \\ + \$ 73.49 \\ \hline \phantom{1} \phantom{5} \end{array}$$

### STEP 2

Add the dimes.

$$\begin{array}{r} \phantom{1} \\ \$ 99.46 \\ + \$ 73.49 \\ \hline \phantom{1} \phantom{95} \end{array}$$

### STEPS 3 and 4

Add the ones.  
Add the tens.

$$\begin{array}{r} \phantom{1} \phantom{1} \\ \$ 99.46 \\ + \$ 73.49 \\ \hline 172 \phantom{95} \end{array}$$

### STEP 5

Insert the decimal  
point and dollar sign.

$$\begin{array}{r} \phantom{1} \phantom{1} \\ \$ 99.46 \\ + \$ 73.49 \\ \hline \$172.95 \end{array}$$

## Lesson 2: Subtract Dollars and Cents

**Objective:** To find the difference between dollar amounts using dollars and cents.

**Description:** By 4<sup>th</sup> grade the children are familiar with the standard algorithm used for subtraction. They also are introduced to decimals at the end of 4<sup>th</sup> grade. In this lesson they use the standard algorithm to subtract dollars and cents. \*Reminder... line up the decimals.

$$\text{Subtract. } \$84.24 - \$52.47$$

Use the decimal point to line up the digits. Work from right to left.  
Check each place to see if you need to regroup to subtract.

### STEP 1

Regroup 2 dimes and 4 pennies as 1 dime and 14 pennies. Subtract the pennies.

$$\begin{array}{r} \$ 84 . \overset{1}{\cancel{2}} \overset{14}{\cancel{4}} \\ - \$ 52 . 47 \\ \hline 7 \end{array}$$

### STEP 2

Regroup 4 dollars and 1 dime as 3 dollars and 11 dimes. Subtract the dimes.

$$\begin{array}{r} \$ 8 \overset{3}{\cancel{4}} . \overset{11}{\cancel{2}} \overset{14}{\cancel{4}} \\ - \$ 52 . 47 \\ \hline 77 \end{array}$$

### STEPS 3 and 4

Subtract the ones.  
Subtract the tens.

$$\begin{array}{r} \$ 8 \overset{3}{\cancel{4}} . \overset{11}{\cancel{2}} \overset{14}{\cancel{4}} \\ - \$ 52 . 47 \\ \hline 3177 \end{array}$$

### STEP 5

Insert the decimal point and dollar sign.

$$\begin{array}{r} \$ 8 \overset{3}{\cancel{4}} . \overset{11}{\cancel{2}} \overset{14}{\cancel{4}} \\ - \$ 52 . 47 \\ \hline \$ 31 . 77 \end{array}$$

$$\text{So, } \$84.24 - \$52.47 = \$31.77$$

## Lesson 3: Order of Operations

**Objective:** To use the order of operations to find the value of expressions.

**Description:** The order of operations is a set of rules that gives the order in which calculations are done in an expression. Note: The students will not use exponent in the order of operations.

Example:  $36 \div (4 + 5) \times 2$

**Step 1:** Perform the operations inside the parentheses.  $4 + 5 = 9$   $36 \div 9 \times 2$

**Step 2:** Since division come first from left to right, divide  $36 \div 9 = 4$   $4 \times 2$

**Step 3:** Multiply  $4 \times 2 = 8$   $8$

$$\text{So, } 36 \div (4 + 5) \times 2 = 8$$

### Order of Operations

1. Perform the operations inside the **parentheses**.
2. **Multiply or Divide** (do whichever comes first from left to right)
3. **Add or Subtract** (do whichever comes first from left to right)

## Lesson 4: Divide by Multiples of 10

**Objective:** To use patterns to divide by multiples of 10.

**Description:** In this lesson the children use their basic division facts to divide by multiples of 10. They start with their basic facts (numbers that they can find in the multiplication tables). As they increase the number of zeros in the dividend (the number that is being divided) and/or the divisor (the number doing the dividing), the quotient (the answer) changes accordingly.

$$24 \div 8 = 3$$

Diagram illustrating the components of the division equation  $24 \div 8 = 3$ . Arrows point from the labels "Dividend", "Divisor", and "Quotient" to the corresponding parts of the equation: 24, 8, and 3 respectively.

Example 1:

$$360 \div 90 =$$

The basic fact that the children know is...

$$36 \div 9 = 4$$

If we increase the dividend and the divisor by the same number of zeros, the quotient does not change.

$$\text{So, } 360 \div 90 = 4$$

Example 2:

$$3,600 \div 90 =$$

The basic fact that the children know is...

$$36 \div 9 = 4$$

If we increase the dividend and the divisor by the same number of zeros, the product does not change.

$$\text{So, } 360 \div 90 = 4$$

Next, we still need to increase the amount of zeros in the dividend. If we increase the amount of zeros in the dividend but do not change the divisor, we increase the amount of zeros in the quotient by the same number.

$$\text{So, } 3600 \div 90 = 40$$

A video explanation can be found at: <http://www.showme.com/sh/?h=al6YmYK>

## Lesson 5: Checkpoint

**Objective:** To review lessons 1 – 4.

## Lesson 6: Place Value through Millions

**Objective:** To read and write numbers less than 1 billion.

**Description:** The children read and write numbers in standard form, expanded form and word form. An example of the three forms are below:

Millions			Thousands			Ones		
Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
3	6	2,	8	1	4,	7	5	9

**Standard form** is a way to write numbers using digits.

**Ex:** 362,814,759

**Expanded form** is a way to write the number by showing the **value** (see below) of each digit.

**Ex:** 300,000,000 + 60,000,000 + 2,000,000 + 800,000 + 10,000 + 4,000 + 700 + 50 + 9

**Word form** is a way to write the number using words.

**Ex:** three hundred sixty-two million, eight hundred fourteen thousand, seven hundred fifty nine.

**Value:** In the number **362,814,759...**

the 6 is in the ten millions column, but the **value** of the 6 is 60,000,000.

## Lesson 7: Decimals and Place Value

**Objective:** To use place value to read and write decimals to the hundredths.

**Description:** In grade 4 the children read and write decimals. Like the place value chart they saw in lesson 6, the children use a place value chart to read and write decimals to the hundredths (2 decimal points)

The number 13.74 is represented as...

Hundreds	Tens	Ones	.	Tenths	Hundredths
	<b>1</b>	<b>3</b>	.	<b>7</b>	<b>4</b>

**Standard form** is a way to write numbers using digits.

**Ex:** 13.74

**Expanded form** is a way to write the number by showing the **value** (see below) of each digit.

$$10 + 3 + \frac{7}{10} + \frac{4}{100}$$

**Ex:**  $10 + 3 + 0.7 + 0.04$

**Word form** is a way to write the number using words.

**Ex:** thirteen and seventy-four hundredths

**Value:** In the number **13.74...**

the 7 is in the tenths, but the **value** of the 7 is 0.7 or  $\frac{7}{10}$

## Lesson 8: Round Decimals

**Objective:** To round decimals to the nearest whole number.

**Description:** In this lesson the children will practice rounding decimals to the nearest whole number. To round the number, look at the digit in the tenths column.

- If the number in the tenths column is greater than or equal to 5, increase the number in the ones column by one.

14.77 is rounded up to 15  
(since  $7 > 5$ )

6.5 is rounded to up to 7  
(since  $5 = 5$ )

- If the number in the tenths column is less than 5, the number in the ones column remains the same.

8.31 is rounded down to 8  
(since  $3 < 5$ )

14.49 is rounded down to 14  
(since  $4 < 5$ )

## Lesson 9: Place Value to Compare Decimals

**Objective:** To compare decimal values using  $>$ ,  $<$  or  $=$ .

**Description:** In this lesson the children compare numbers using the following symbols.

<u>Symbol</u>	<u>Meaning</u>
$>$	is greater than
$<$	is less than
$=$	is equal to

For example:  $53.41 > 52.89$

Both numbers have 5 tens, but 53.41 has 3 ones while 52.89 only has 2 ones.

Since  $3 > 2$ , that means that  $53.41 > 52.89$ .

## Lesson 10: Number Patterns

**Objective:** To use multiplication to describe a pattern.

**Description:** The children are familiar with recognizing patterns. In this lesson they recognize the factor by which they multiply to create the pattern and determine the following numbers in the pattern.

The children may want to ask themselves, "What do I have to multiply \_\_\_\_\_ by to get \_\_\_\_\_?"

That will tell them the pattern.

EX: Find the next number in the pattern.

4, 12, 36, 108, \_\_\_\_\_

Therefore,  $108 \times 3 = \underline{324}$ .

"What do I have to multiply  
4 by to get 12?"

Since,  $4 \times 3 = 12\dots$

And  $12 \times 3 = 36$ ,  
the pattern is multiply by 3.

## Lesson 11: Checkpoint

**Objective:** To review all of the topics from lesson 6 - 10.

## Lesson 12: Representing Fractions

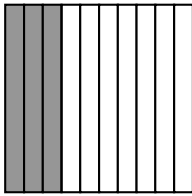
**Objective:** To represent a fraction using pictures.

**Description:** In this lesson, the children recognize fractions as a part of a whole. While describing fractions, they use the following terms:

$\frac{7}{8}$  ← Numerator = The number of parts being counted.

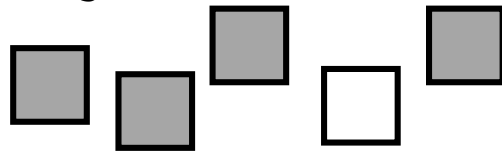
$\frac{7}{8}$  ← Denominator = The number of equal parts that are in the whole or in the group.

$\frac{3}{10}$  of the square is shaded.



(The whole is divided into 10 equal parts and 3 are shaded)

$\frac{4}{5}$  if the squares are shaded.



(5 squares make up the whole. 4 of the squares are shaded)

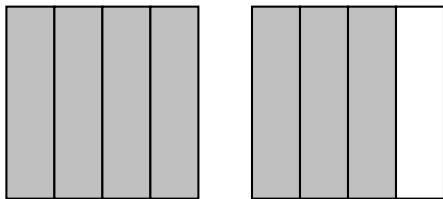
## Lesson 12: Model Fractions Greater than One.

**Objective:** To represent a fraction greater than 1 in different ways.

**Description:** A fraction greater than 1 has a numerator that is greater than its denominator. A **mixed number** has a whole-number and a fraction. The example shows  $\frac{7}{4}$ .

### **Method 1: Using a drawing.**

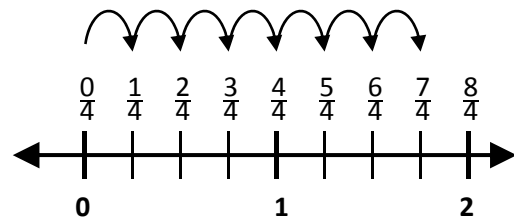
- Draw squares divided into fourths.
- 7 of the  $\frac{1}{4}$  are shaded.



We shaded 1 whole and  $\frac{3}{4}$  of the other whole. So the mixed number is  $1\frac{3}{4}$ .

### **Method 2: Using a number line.**

- Start at 0 and make 7 jumps of  $\frac{1}{4}$ .



We jumped past the 1 and are  $\frac{3}{4}$  of the way to the next whole number. So the mixed number is  $1\frac{3}{4}$ .

The number  $\frac{7}{4}$  is a fraction greater than 1. A fraction greater than 1 can be written as a **mixed number**. A mixed number has a whole number and a fraction.  $\frac{7}{4} = 1\frac{3}{4}$

The video at: <https://learnzillion.com/lessons/1438-represent-a-fraction-greater-than-one-using-area-models> may be helpful.

## Lesson 14: Equivalent Fractions

**Objective:** To represent equivalent fractions with drawings.

**Description:** Some videos that may help the children are:

<https://learnzillion.com/lessons/531-use-area-models-to-generate-equivalent-fractions>

<https://learnzillion.com/lessons/616-recognize-equivalent-fractions-using-area-models>



### **Lesson 15: Add related fractions**

**Objective:** To add fractions with the same denominators (common denominators).

**Description:** In grade 4 student focus on addition of fractions with common denominators.

If the denominators are the same, we add the numerators.

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

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

Two videos that may be helpful are:

<https://learnzillion.com/lessons/110-add-fractions-with-like-denominators-in-number-sentences>

<https://learnzillion.com/lessons/109-add-fractions-with-like-denominators-from-two-different-wholes>

### **Lesson 16: Subtract related fractions**

**Objective:** To subtract fractions with the same denominators (common denominators).

**Description:** In grade 4 student focus on subtraction of fractions with common denominators.

If the denominators are the same, we subtract the numerators.

$$\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$$

$$\frac{6}{7} - \frac{2}{7} = \frac{4}{7}$$

Two videos that may be helpful are:

<https://learnzillion.com/lessons/113-subtract-fractions-with-like-denominators-labeling-shapes>

<https://learnzillion.com/lessons/114-subtract-fractions-with-like-denominators-labeling-sets>

## Lesson 17: Compare Fraction Products

**Objective:** To compare the size of the product to the size of each factor when one of the factors is a fraction.

**Description:** A common misconception is that when we multiply two numbers, our product is always bigger than each product.

For example:  $3 \times 4 = 12$ . The product is greater than each of the factors ( $12 > 3$  and  $12 > 4$ )

This is not true when we deal with fractions.

$$2 \times \frac{3}{8} =$$

Means "2 groups of  $\frac{3}{8}$ ,"

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

$$\text{So, } 2 \times \frac{3}{8} = \frac{6}{8}$$

In this case,  $\frac{6}{8} > \frac{3}{8}$  but  $\frac{6}{8} < 2$

Here are some videos that may help.

<https://learnzillion.com/lessons/126-multiply-fractions-by-whole-numbers-using-models>

<https://learnzillion.com/lessons/1429-multiply-a-fraction-by-a-whole-number-using-visual-models-and-repeated-addition>

## Lesson 18: Checkpoint.

**Objective:** To review all of the topics from lesson 12 - 17.