Greek Orthodox
Patriarchate School
International - Hanina

Unit 1

Name: _____   **Lesson 1.1**   **Grade 5A**

Date: _____   **Place Value**   **Worksheet (3)**

Objective(s): Compose, decompose and regroup numbers with up to 3 decimal places.

Composing Numbers

- Joining groups or sets of numbers to make another number.
- Involves combining different place values to create a single number.
- **Standard form** is how that composed number is finally written as a single numeral.

Standard form is the normal way we usually write numbers. It's just the number itself.

☐ **235** → standard form
☐ **4,812** → standard form

Write the number in **standard form**:

1. 3+0.2+0.05 _____

2. 7+0.04+0.008 _____

3. 12+0.3+0.07+0.006 _____

4. 200+30+0.4+0.007 _____

5. 40+0.8+0.07 _____

6. 1,000+300+40+1+0.5+0.006 _____

Decomposing Numbers

- Break numbers down into their component parts.
- Breaking them down into their individual place values.

Expanded Form is a way of breaking the number apart to show the value of each digit (based on place value). It shows how the number is built.

Decompose each of the following numbers into their place-value parts:

1. 472.36   _____

2. 5,138.049 _____

3. 86.207   _____

Decomposing Negative numbers.

- A negative number is just a number less than zero.
- When we decompose a negative number, the negative applies to the **whole number**, including all its parts.

Key Points to Remember
- Every place-value part of a negative number is negative.
- The process of decomposing **does not change**, you just keep track of the negative sign.

Suppose we have −472.306:
- First, decompose the positive version: 472.306=400+70+2+0.3+0.006
- Then, apply the negative sign to **each part**, because the whole number is negative:

$$-400-70-2-0.3-0.006$$

Decompose the following negative numbers into their place-value parts

   1. −583.407   _____

   2. −42.305   _____

   3. −7,216.089   _____

Regrouping numbers.

- Regrouping is rearranging values between place values.

Take your example: **0.546**
- Normally, the standard decomposition (expanded form) is: **0.5+0.04+0.006**
- But you can regroup the parts differently while keeping the total the same: **0.4+0.14+0.006=0.546**

- **Sofia is regrouping her number 12.486 in different ways. She writes down four regroupings:**
1. **10 + 2 + 0.4 + 0.08 + 0.006**

2. **12 + 0.4 + 0.08 + 0.006**

3. **12 + 0.48 + 0.006**

4. **12.4 + 0.08 + 0.006**

Two of these regroupings are incorrect. Which ones are wrong?

- **If this number is a decimal number with three decimal places.**
  259.__28

              200+50+9+0.7+0.02+0.008

What could be the Missing number? _____