

3rd Grade Math: Addition with Regrouping in Ones, Tens, Hundreds

Lesson Objective:

By the end of this lesson, students will:

- Understand how to add multi-digit numbers with regrouping in the ones, tens, and hundreds places.
- Be able to identify when regrouping is necessary.
- Solve addition problems involving regrouping in different place values.

1. Introduction to Addition with Regrouping

What is Regrouping?

- **Regrouping** is used when the sum of the digits in any place value column (ones, tens, or hundreds) is 10 or more. We regroup by carrying over the extra value to the next higher place value.

Why Do We Regroup?

- Regrouping ensures that the digits are correctly placed in the ones, tens, and hundreds columns. When we have more than 9 in a place value, we must carry the extra over to the next place.

2. Steps for Addition with Regrouping in Ones, Tens, and Hundreds

Step 1: Align the Numbers

- Write the numbers vertically with their place values aligned (ones under ones, tens under tens, hundreds under hundreds).

Step 2: Add the Ones Place

- Start with the ones place. If the sum is 10 or greater, regroup by carrying the extra value to the tens place.

Step 3: Add the Tens Place

- Add the digits in the tens place, including any regrouped value from the ones place. If the sum is 10 or greater, regroup by carrying the extra value to the hundreds place.

Step 4: Add the Hundreds Place

- Add the digits in the hundreds place, including any regrouped value from the tens place. If the sum is 10 or greater, regroup by carrying the extra value to the next higher place value (if necessary).

3. Example Problems

Example 1: Regrouping in the Ones

- Problem: $46 + 58$
 - Align the numbers:

```
diff Copy code  
  
  46  
+ 58
```

- - Add the ones place: $6 + 8 = 14 \rightarrow$ Write 4, carry 1 to the tens place.
 - Add the tens place: $4 + 5 + 1 = 10 \rightarrow$ Write 0, carry 1 to the hundreds place (if needed).
 - Sum: **104**

Example 2: Regrouping in Ones and Tens

- Problem: $157 + 249$
 - Align the numbers:

```
diff Copy code  
  
 157  
+ 249
```

- - Add the ones place: $7 + 9 = 16 \rightarrow$ Write 6, carry 1 to the tens place.
 - Add the tens place: $5 + 4 + 1 = 10 \rightarrow$ Write 0, carry 1 to the hundreds place.
 - Add the hundreds place: $1 + 2 + 1 = 4$
 - Sum: **406**

Example 3: Regrouping in Ones, Tens, and Hundreds

- Problem: $389 + 647$

- Align the numbers:

```
diff                                                                    Copy code

  389
+ 647
```

- Add the ones place: $9 + 7 = 16 \rightarrow$ Write 6, carry 1 to the tens place.
- Add the tens place: $8 + 4 + 1 = 13 \rightarrow$ Write 3, carry 1 to the hundreds place.
- Add the hundreds place: $3 + 6 + 1 = 10 \rightarrow$ Write 0, carry 1 to the next place.
- Sum: **1036**

4. Practice Problems

Activity 1: Solve the Following Problems

1. $268 + 394 = ?$
2. $576 + 825 = ?$
3. $429 + 582 = ?$
4. $791 + 344 = ?$
5. $678 + 259 = ?$

5. Wrap-Up

Key Takeaways:

- When adding multi-digit numbers, regrouping helps manage sums greater than 9 in any place value.
- Always align numbers by place value before adding.
- Regrouping may be needed in the ones, tens, or hundreds place, depending on the numbers.

Exit Question:

- Solve: $538 + 367 = ?$