2nd Grade Math: Multiplying by 10 Using Skip-Counting and Dot Paper

What Is Skip-Counting?

Skip-counting is counting by a number other than 1. When multiplying by 10, skip-counting helps us quickly find the total by adding groups of 10.

How to Multiply by 10

When we multiply by 10, we are essentially adding 10 repeatedly. For example, multiplying **10 × 3** means adding three groups of 10:

$$10 + 10 + 10 = 30$$

Skip-counting by 10:

$$10, 20, 30$$

Both methods give us the same result:

- **10 × 3 = 30.**

Using Dot Paper to Multiply by 10

Dot paper is a useful tool for visualizing multiplication. Here's how to multiply by 10 using dot paper:

1. **Problem**: Multiply **10 × 4.**

2. **Step 1**: Draw 4 rows of 10 dots each.

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3. **Step 2**: Count the total number of dots.

   - Each row has 10 dots.

   - There are 4 rows.

4. **Step 3**: Use skip-counting by 10 to find the total.

   - **10, 20, 30, 40.**

5. **Answer**: 10 × 4 = 40.

Example 1: Multiply 10 × 5 Using Dot Paper

1. **Problem**: Multiply **10 × 5**.

2. **Step 1**: Draw 5 rows of 10 dots each.

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3. **Step 2**: Count the total number of dots.

   - Each row has 10 dots.

   - There are 5 rows.

4. **Step 3**: Skip-count by 10 to find the total.

   - **10, 20, 30, 40, 50.**

5. **Answer**: 10 × 5 = 50.

Example 2: Multiply 10 × 6 Using Dot Paper

1. **Problem**: Multiply **10 × 6**.

2. **Step 1**: Draw 6 rows of 10 dots each.

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3. **Step 2**: Count the total number of dots.

   - Each row has 10 dots.

   - There are 6 rows.

4. **Step 3**: Skip-count by 10 to find the total.

   - **10, 20, 30, 40, 50, 60.**

5. **Answer**: 10 × 6 = 60.

Practice Multiplying by 10 Using Skip-Counting and Dot Paper

1. **Multiply 10 × 2**: Draw 2 rows of 10 dots each and count the total.
2. **Multiply 10 × 3**: Draw 3 rows of 10 dots each and count the total.
3. **Multiply 10 × 7**: Draw 7 rows of 10 dots each and count the total.

Why Use Skip-Counting and Dot Paper for Multiplication?

- **Visual Learning**: Dot paper helps students see how multiplication works by organizing numbers into groups.
- **Understanding Patterns**: Skip-counting by 10 shows students the connection between multiplication and addition.
- **Hands-On Practice**: Drawing dots gives students a physical way to engage with multiplication.

Real-World Example

Problem: You are packing boxes with 10 toys each. If you have 4 boxes, how many toys do you have in total?

1. **Step 1**: Multiply 10 × 4.
2. **Step 2**: Draw 4 rows of 10 dots.

3. **Step 3**: Count the total or skip-count by 10.

- **Answer**: You have 40 toys.

Conclusion

Using skip-counting and dot paper makes multiplying by 10 easier and more interactive for 2nd graders. It helps students visualize multiplication and understand its relationship with addition, laying a strong foundation for future math concepts.