

Materials Needed:

- Pencil
 - Paper
 - Timer (optional)
 - Calculator (optional, for checking work)
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Lesson: Karate Kicks & Arithmetic Drills!

Hey Karateka! Did you know that the focus, precision, and discipline you use in Karate are super useful in math too? Today, we're going to combine your awesome Karate spirit with some arithmetic challenges. Think of it like training your brain dojo! Ready? Hajime!

Warm-up: Mental Math Sparring (5 minutes)

Let's warm up our brains like we warm up our bodies. I'll give you some quick math problems. Answer as fast as you can! (Parent/Teacher can read these aloud or write them quickly)

- $5 + 8 = ?$
- $14 - 6 = ?$
- $3 \times 7 = ?$
- $20 / 4 = ?$
- $12 + 9 = ?$
- $25 - 10 = ?$
- $6 \times 6 = ?$
- $45 / 9 = ?$
- $2 \times 8 + 4 = ?$
- $(10 + 5) / 3 = ?$

Great job! Quick thinking is key in both math and sparring!

Activity 1: Kata Combinations (Word Problems - 15 minutes)

Katas require precise sequences. Let's solve some problems based on Karate training.

1. **Belt Test Fees:** To test for the next belt, the fee is \$55. If 8 students are testing, what is the total amount collected in fees?
2. **Practice Time:** You practice Karate 3 times a week for 1.5 hours each session. How many total hours do you practice in 4 weeks?
3. **Kata Sequence:** Your kata has 4 Kiai points (shouts). If the kata has 32 moves in total, what fraction of the moves include a Kiai? (Simplify the fraction if possible!)
4. **Board Breaking:** For a demonstration, the sensei prepared 5 stacks of boards, with 6 boards in each stack. If 13 boards were broken during the demo, how many boards are left unbroken?
5. **Dojo Mats:** The dojo floor is covered by square mats. If there are 12 rows of mats and 15 mats in each row, how many mats cover the dojo floor in total?

Activity 2: Dojo Drills - Fractions & Percentages (15 minutes)

Let's use fractions and percentages to understand our training better.

- **Stance Practice:** During a 60-minute class, you spend $\frac{1}{4}$ th of the time practicing stances. How many minutes is that?
- **Sparring Rounds:** A sparring session has 5 rounds. You win 3 rounds. What percentage of the rounds did you win? (Remember: Percentage = $(\text{Part}/\text{Whole}) \times 100$)
- **Training Focus:** Your sensei says 40% of today's 50-minute private lesson will focus on kicks. How many minutes will be spent on kicks?
- **Discount on Gear:** Your new Gi costs \$80, but there's a 15% discount for dojo members. How much money do you save with the discount? How much does the Gi cost after the discount?

Cool-down: Reflection (5 minutes)

Awesome work, martial artist! See how math is everywhere, even in the dojo? We used addition, subtraction, multiplication, division, fractions, and percentages – all tools to help us understand and plan things better, just like different Karate techniques.

What was your favorite math 'move' today? Where else could you use math in your Karate practice?

Keep practicing, both in the dojo and with your math! Oss!