Marking Fraction Lengths on the Number Line

A. Choose the Correct Answer:

1. **Which fraction lies exactly halfway between 0 and 1 on a number line?**
   a) $\frac{1}{4}$ b) $\frac{1}{3}$
   c) $\frac{1}{2}$ d) $\frac{3}{4}$
2. **On a number line divided into 4 equal parts between 0 and 1, what is the value at the third mark?**
   a) $\frac{1}{2}$ b) $\frac{3}{4}$
   c) $\frac{1}{4}$ d) $\frac{2}{4}$
3. **Which point lies to the right of $\frac{1}{2}$ on the number line?**
   a) $\frac{1}{4}$ b) $\frac{1}{3}$
   c) $\frac{3}{4}$ d) $\frac{2}{6}$
4. **How many equal parts do you divide the line segment into to mark eighths between 0 and 1?**
   a) 4 b) 8
   c) 6 d) 2
5. **What fraction is represented by the 5th mark on a number line from 0 to 1 divided into 6 equal parts?**
   a) $\frac{5}{6}$ b) $\frac{1}{5}$
   c) $\frac{6}{6}$ d) $\frac{4}{6}$

B. Write the Missing Terms to Complete the Sentences:

1. A number line helps to show _____ values between whole numbers.
2. To mark $\frac{1}{3}$ on a number line, we divide the section from 0 to 1 into _____ equal parts.
3. The fraction $\frac{2}{4}$ is placed at the same point as _____ on the number line.
4. $\frac{3}{5}$ lies between _____ and _____ on the number line.
5. A number line is divided into equal sections to represent different _____.

C. Figure out the answers to these questions:

1. Draw a number line from 0 to 1 and mark $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{3}{4}$ on it.

2. Write a step-by-step method to show how to plot $\frac{2}{5}$ on a number line.
3. Draw a number line from 0 to 2 and show all halves and quarters between them.
4. On a number line, $\frac{1}{6}$ is marked. How many equal divisions are there between 0 and 1?
5. Compare the positions of $\frac{1}{3}$ and $\frac{2}{5}$ on a number line. Which is greater?
6. If a number line is marked with sixths, what fraction comes just before $\frac{5}{6}$?

D. Mark each sentence with a True (✓) or False (✗):

1. $\frac{1}{2}$ is the same as $\frac{2}{4}$ on the number line. ☐
2. The number line can only show whole numbers. ☐
3. A number line divided into 3 equal parts will show thirds. ☐
4. $\frac{3}{5}$ is located between $\frac{1}{2}$ and 1 on the number line. ☐
5. Fractions cannot be placed on a number line. ☐

E. Challenge yourself with these questions:

1. Mark 0, $\frac{1}{3}$, $\frac{2}{3}$, and 1 on a number line.
2. Draw a number line and label 0 to 2 with fifths.
3. Describe how you would show $\frac{3}{8}$ on a number line using a ruler.
4. Find a pair of equivalent fractions and show both on the same number line.
5. Why is $\frac{1}{2}$ always in the middle of 0 and 1? Explain using a diagram.
6. Draw a number line from 0 to 1 and mark $\frac{1}{6}$, $\frac{2}{6}$, $\frac{3}{6}$, and $\frac{4}{6}$.
7. Explain how a number line helps in comparing $\frac{2}{5}$ and $\frac{3}{5}$.
8. Show fractions from 0 to 1 using tenths on a number line.
9. A line is divided into 10 equal parts. What fraction is at the 7^{th} mark?
10. Write a real-life situation where using a number line for fractions is helpful.

F. Represent the following fractions on the number line:

i. $\frac{3}{5}$ ii. $\frac{5}{9}$ iii. $\frac{12}{24}$ iv. $\frac{24}{50}$