Fractions as Distances

Module 3
Session 4

Today's Activities

- Work with fractions on a number line
- Work Places

Life Sized Number Line

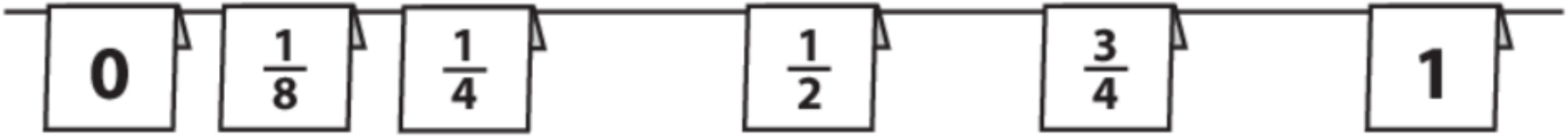
Notice the string hung in our classroom. This string will serve as a life-sized number line for the next few days. The entire length of the string, from one end to the other, represents a distance of 1 today.

Now we will label the ends of our number line with 0 and 1 by hanging a card on each end. How would we go about locating the point exactly halfway between the two points? How would we label this point?

How would we label ¼? ¾? ⅛?

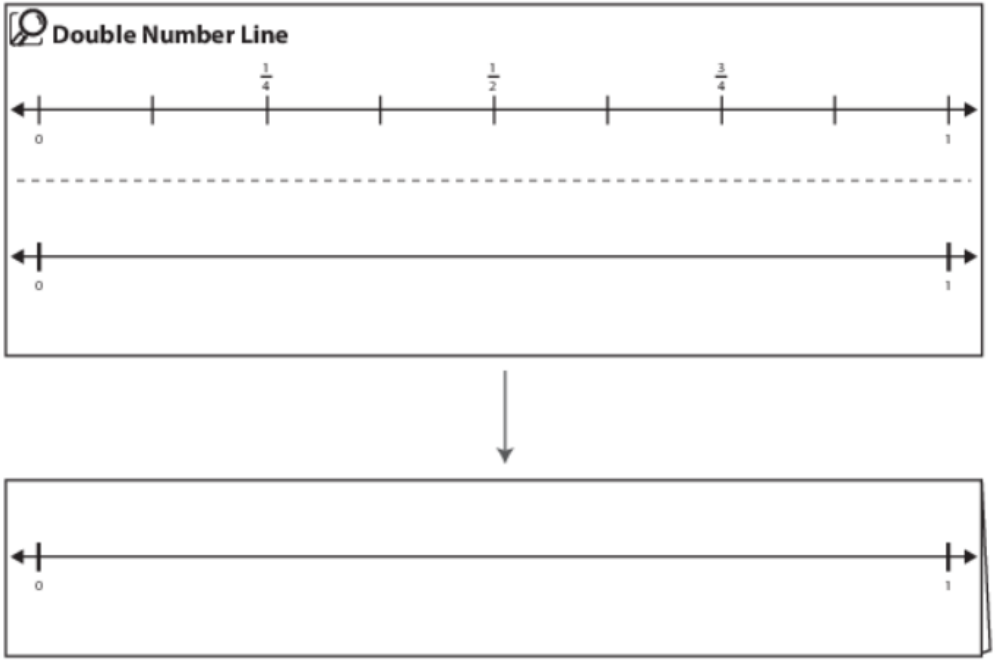
Life Sized Number Line

You will each make your own number line and see how accurately you can locate the fractions along the line, now that you have had some practice as a class.



Double Number Line

CUT along the heavy (solid) lines and **FOLD** it in half along the dotted line.



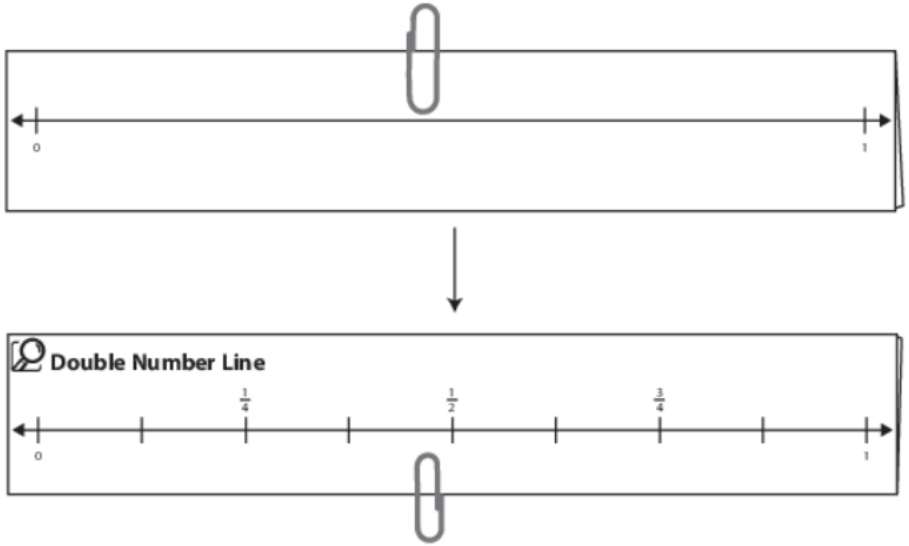
Double Number Line

Share with a partner any mathematical observations you can make about your Double Number Lines.

Take a paperclip and slide the clip down over the fold. Working with the side marked only with a 0 and 1, slide your paperclip along the fold until you think you have gone exactly halfway.

Double Number Line

Flip the line over to check. Did the clip land on the mark labeled with the fraction ½?



Double Number Line

Can you develop a strategy for getting the paperclip to land exactly on the ½ mark without peeking?

Now, slide your paperclip one-fourth of the way along the unmarked line.

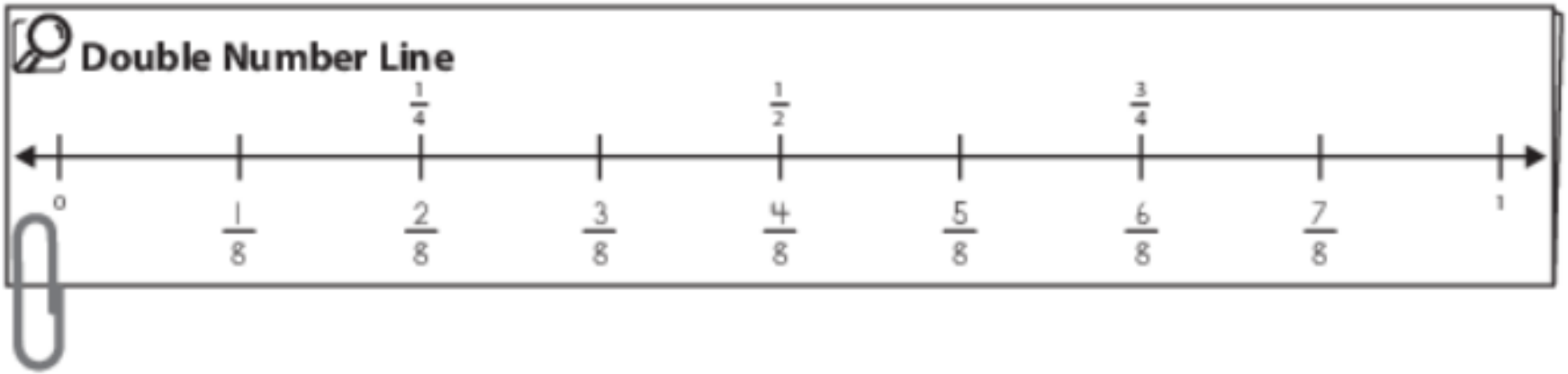
Can you come up with a strategy for getting the clip to land on or very near the marked labeled with ¼?

Double Number Line

How can we label some of the marks that haven’t been labeled with a fraction yet?

Let’s work together to label each of the marks on the number line drawn on the board. You will also label the marks on your own number lines.

Double Number Line



Double Number Line

Turn over your number line so it is back to the unmarked side. Can you slide the paperclip three-fourths of the way along the line?

Now check on the other side. How close did you come to hitting the mark labeled ¾? Share your strategies.

Can you also slide the paperclip to ⅛, 6/8, ⅜, ¼+¼, ⅛+⅛ ?

Work Places - if time allows

- 3C - Round Ball Hundreds
- 3D - Round & Add Hundreds
- 4A - Tic-Tac-Tok
- 4B - Measurement Scavenger Hunt
- 4C - Target One Thousand
- 4D - Hexagon Spin & Fill

Closing

- Which is closer to 0, ⅕ or 1/100? How do you know?
- What is closer to 0, 1/50 or ⅕? How do you know?

Optional

Complete The Broken Ruler, Part 1 on page 133 in your student book.