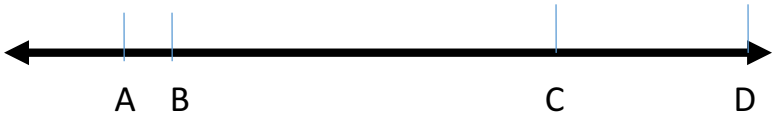
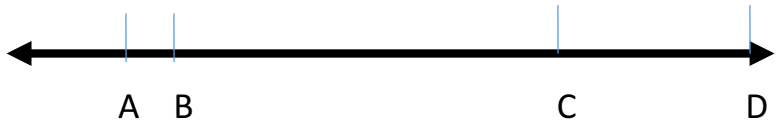
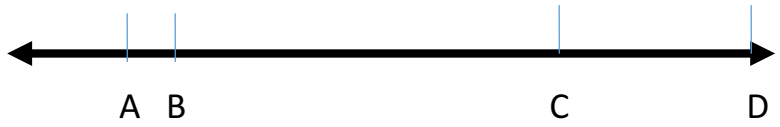
Problem of the Week

There has been plenty of discussion these past few years about numberless word problems and numberless graphs. However, I want to suggest that we can use this same approach to number lines. Trust me, I am aware that it sounds counterintuitive to suggest having a number line without numbers, but hear me out. What if we presented an open number line to students with a few hash marks written on it. We could then ask students what numbers would be represented by the hash marks and how can they rationalize their selection. We could also ask students what numbers couldn't be represented by the hash marks and how they can rationalize this response. By assigning the following tasks, the teacher will be able to formatively assess student mathematical understanding and be able to support students in strengthening their metacognition.

Be mindful that during these prompts, it is important the teacher listens to student conversations and asks questions that illicit student thinking.

Primary	1. Share the following number line with students.  2. Ask students to think of a number that is represented by A. 3. Ask students to think of a number that is represented by B. Why did they choose that particular number for B? 4. What will they need to consider when choosing a number for C? 5. What number did they choose for C? Why? 6. What will they need to consider when choosing a number for D? 7. What number did they choose for D? Why?
When engaging primary students in this task, students can use base-ten blocks instead of the symbolic form when representing numbers.	

Elementary	1.  2. Ask students to think of a decimal number that is represented by A. 3. Ask students to think of a decimal number that is represented by B. Why did they choose that particular decimal number for B? 4. What will they need to consider when choosing a decimal number for C? 5. What decimal number did they choose for C? Why? 6. What will they need to consider when choosing a decimal number for D? 7. What decimal number did they choose for D? Why?
When engaging elementary students in this task, you can choose decimal numbers, fractions, integers or whole numbers.	

Intermediate	1.  2. Ask students to think of a fraction that is represented by A. 3. Ask students to think of a fraction that is represented by B. Why did they choose that particular fraction for B? 4. What will they need to consider when choosing a fraction for C? 5. What fraction did they choose for C? Why? 6. What will they need to consider when choosing a fraction for D? 7. What fraction did they choose for D? Why?
When engaging intermediate students in this task, you can choose rational numbers or expressions.	