

# M6L1: Construct a Coordinate System on a Line

$$\frac{0}{2} \quad \frac{1}{2} \quad \frac{2}{2} \quad \frac{3}{2} \quad \frac{4}{2} \quad \frac{5}{2} \quad \frac{6}{2} \quad \frac{7}{2} \quad \frac{8}{2} \quad \frac{9}{2} \quad \frac{10}{2}$$

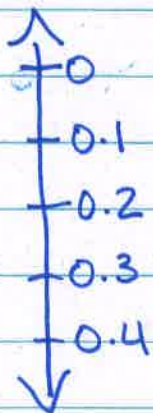
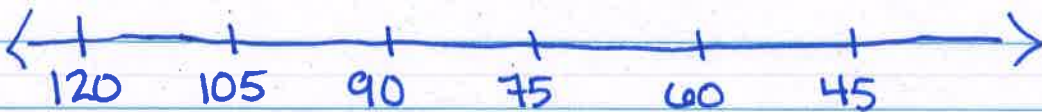
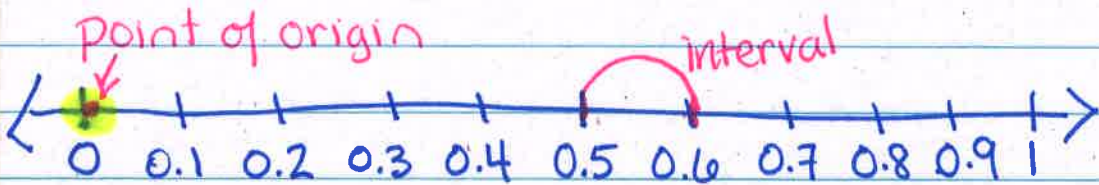
$$0 \quad \frac{1}{2} \quad 1 \quad 1\frac{1}{2} \quad 2 \quad 2\frac{1}{2} \quad 3 \quad 3\frac{1}{2} \quad 4 \quad 4\frac{1}{2} \quad 5$$

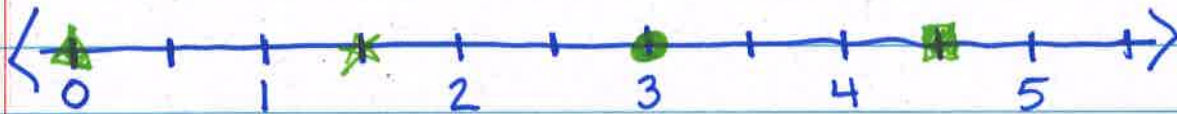
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$$\frac{0}{4} \quad \frac{1}{4} \quad \frac{2}{4} \quad \frac{3}{4} \quad \frac{4}{4} \quad \frac{5}{4} \quad \frac{6}{4} \quad \frac{7}{4} \quad \frac{8}{4} \quad \frac{9}{4} \quad \frac{10}{4}$$

$$0 \quad \frac{1}{4} \quad \frac{2}{4} \quad \frac{3}{4} \quad 1 \quad 1\frac{1}{4} \quad 1\frac{2}{4} \quad 1\frac{3}{4} \quad 2 \quad 2\frac{1}{4} \quad 2\frac{2}{4}$$

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$$\star = 1\frac{1}{2}$$

$$\blacksquare = 4\frac{1}{2}$$

$$\bullet = 3$$

$$\blacktriangle = 0 \text{ (point of origin)}$$

Name \_\_\_\_\_

Date \_\_\_\_\_

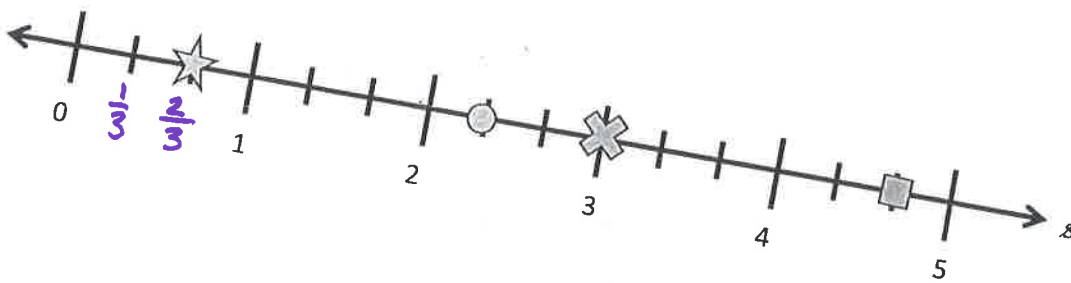
1. Each shape was placed at a point on the number line  $s$ . Give the coordinate of each point below.

a.  3

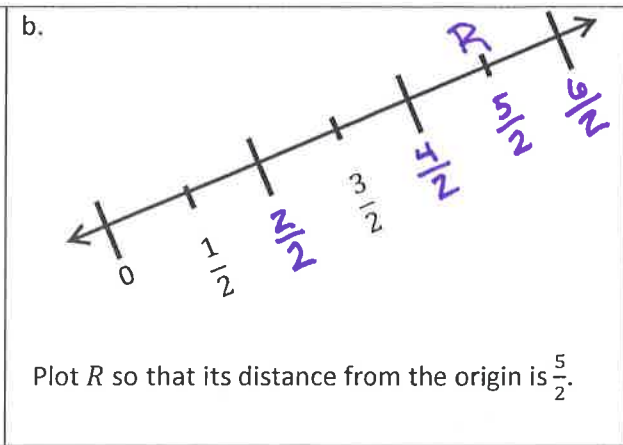
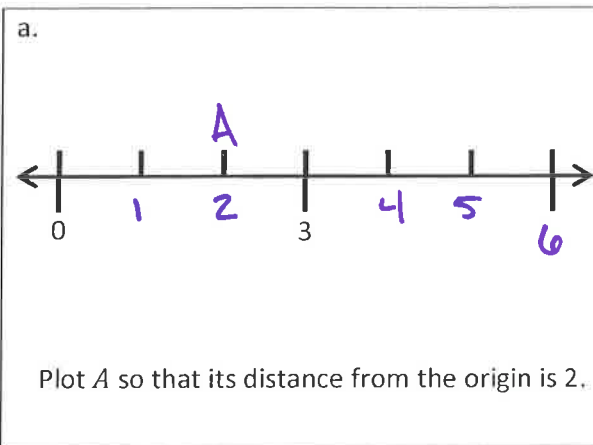
b.   $\frac{2}{3}$

c.   $2\frac{1}{3}$

d.   $4\frac{2}{3}$



2. Plot the points on the number lines.



c.

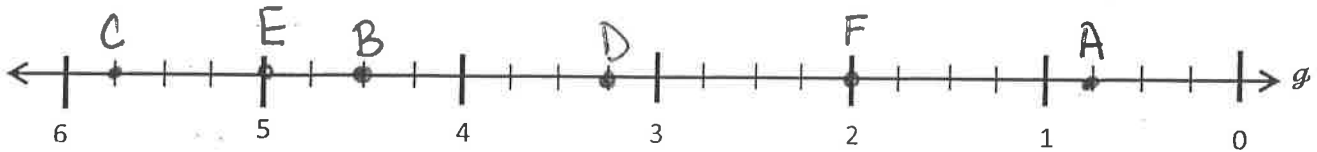
Plot  $L$  so that its distance from the origin is 20.

d.

Plot a point  $T$  so that its distance from the origin is  $\frac{2}{3}$  more than that of  $S$ .

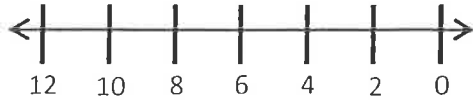
$$\frac{2}{3} = \frac{4}{6}$$

3. Number line  $g$  is labeled from 0 to 6. Use number line  $g$  below to answer the questions.



- Plot point  $A$  at  $\frac{3}{4}$ .
- Label a point that lies at  $4\frac{1}{2}$  as  $B$ .
- Label a point,  $C$ , whose distance from zero is 5 more than that of  $A$ .  
The coordinate of  $C$  is  $5\frac{3}{4}$ .
- Plot a point,  $D$ , whose distance from zero is  $1\frac{1}{4}$  less than that of  $B$ .  
The coordinate of  $D$  is  $3\frac{1}{4}$ .
- The distance of  $E$  from zero is  $1\frac{3}{4}$  more than that of  $D$ . Plot point  $E$ .
- What is the coordinate of the point that lies halfway between  $A$  and  $D$ ? 2  
Label this point  $F$ .

4. Mrs. Fan asked her fifth-grade class to create a number line. Lenox created the number line below:



Parks said Lenox's number line is wrong because numbers should always increase from left to right. Who is correct? Explain your thinking.

Lenox is correct because her number line uses equal intervals to increase. It doesn't matter which direction it goes.

5. A pirate marked the palm tree on his treasure map and buried his treasure 30 feet away. Do you think he will be able to easily find his treasure when he returns? Why or why not? What might he do to make it easier to find?

No because it doesn't give the direction which to go.

