

## 2.3A Homework: Number Line City\*

Name: \_\_\_\_\_

Period: \_\_\_\_\_

In Number Line City, there is one straight road. All the residents of number line city live either East (+) or West (-) of Town Hall (0). All addresses are given as positive or negative rational numbers. Mark the location (with a dot and first letter) of the following addresses on the map of Number Line City below:

● Betsy:  $-1\frac{3}{4}$

● Allyson: - 2.5

● Chris:  $5\frac{1}{2}$

● David: 6.0

● Frank:  $\frac{10}{4}$

● Emily: 7.25

● Hannah:  $6\frac{1}{5}$

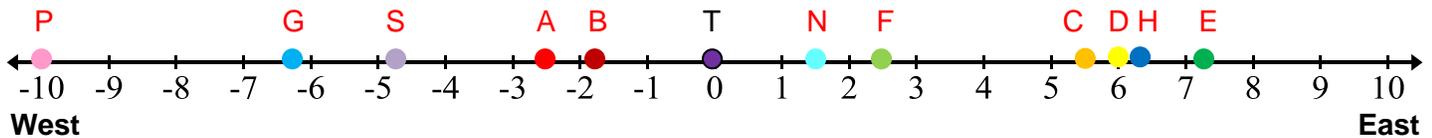
● George: -6.2

● Number Line School:  $1\frac{1}{2}$

● Town Hall: 0

● Store: -4.8

● Post Office: -10



Answer the following. Write an expression to find the distance, then compute it and name the direction (East or West).

- How far is it from Allyson's house to Betsy's house?

It is East 0.75 units to Betsy's house.

- How far is it from Chris's house to Betsy's house?

It is West 7.25 or  $7\frac{1}{4}$  units from Chris's house to Betsy's house.

- How far is it from David's house to Chris's house?

It is West 0.5 units to Chris's house.

- How far is it from Emily's house to George's house?

It is West 13.45 units to George's house.

- Who lives closer to the Store, Allyson or George? Explain.

Answer: George lives closer to the Grocery Store. G: 1.4, A: 2.3

- Who lives closer to Town Hall, George or Hannah? Explain.

Answer: George and Hannah live the same distance from Town Hall. G: 6.2

- The mailman leaves the post office and first makes a delivery to Hannah, then picks up a package from George, and finally delivers the package to Frank before returning to the post office. How far did the mailman travel?

Answer: The mailman traveled 49.8 units.

8. Every morning, Betsy walks to Allyson's house and they walk together to school. How far does Betsy walk each morning? How much further does Betsy walk than Allyson?

Answer: **Betsy walks 4.75 units, which is 0.75 units more than Allyson walks each morning.**

9. Iris moves into Number Line City. She finds out that she lives exactly 3.45 units from Emily. Where could Iris live?

**Iris either lives at 3.8 or 10.7.**

10. Jake moves into Number Line City. He moves into a home  $2\frac{1}{4}$  units from Chris's home. Where could Jake live?

**Jake would live at 7.75 or 3.25,  $7\frac{3}{4}$  or  $3\frac{1}{4}$ .**

11. What two expressions could be used to find the distance between Frank and Hannah?

$$\left| \frac{10}{4} - 6\frac{1}{5} \right| \text{ or } \left| 6\frac{1}{5} - \frac{10}{4} \right|$$

**For #12–15, solve each problem. Show your work.**

12. A Chronicles of Narnia book has pages that are 7 inches wide by 9 inches tall. The printed area measures  $5\frac{3}{8}$  inches by  $7\frac{3}{4}$  inches. The left margin is  $\frac{5}{16}$  inches and the top margin is  $\frac{9}{16}$  inches. How wide are the margins at the right and the bottom of the page? (Hint: Draw and label a picture. Remember the margins do not all have to be the same size.)

**$1\frac{5}{16}$  in. right margin**

**$\frac{11}{16}$  in. bottom margin**

13. Wes is 4 feet tall. If he grew  $1\frac{1}{8}$  in. during the past year, and  $\frac{3}{4}$  in. the year before, how tall was he one year ago?

**$46\frac{7}{8}$  inches or 3 ft  $10\frac{7}{8}$  in**

14. The Anderson family drove  $1\frac{1}{2}$  h to the Ducks game. The trip home by another route took  $1\frac{2}{3}$  h. What was the total travel time? Express your answer in 3 ways using minutes/hours.

**$3\frac{1}{6}$  hours, 3 hours and 10 minutes. 190 minutes**

15. Two years ago, total snowfall in Buffalo, NY for February and March was  $7\frac{1}{4}$  ft. This year 4 feet of snow fell in February and  $1\frac{3}{8}$  ft fell in March. How much less snow fell during this period this year than two years ago?

$1\frac{7}{8}$  feet less snow fell this year.

