1. Spalding is a company that makes basketballs for professional basketball teams. Current basketball rules state that a professional basketball must weigh 17.5 ounces and will reject any basketballs that are more than 2.5 ounces away from the target weight. The scales at Spalding are calibrated to show how close each basketball weighs to the target weight of 17.5 ounces. The scale will display:

- A positive number if the basketball weighs over 17.5 ounces

- A negative number if the basketball weighs under 17.5 ounces

- Zero if the basketball weighs exactly 17.5 ounces.

Which basketballs will be rejected by the scale? **Use the number line below to demonstrate where each basketball would be on the number line.** Then select all that apply.

a.   A basketball with a scale reading of -2.4 ounces

b.   A basketball with a scale reading of 1.6 ounces

c.   A basketball with a scale reading of -2.75 ounces

d.   A basketball with a scale reading of 17.5 ounces

e.   A basketball with a scale reading of 3.55 ounces
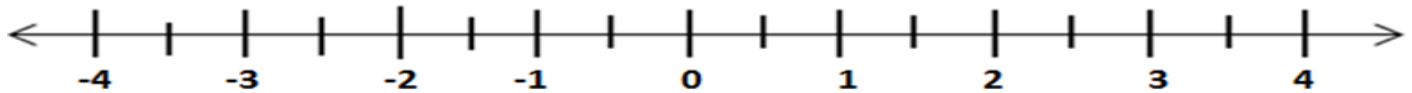
2. Frito Lay is the food company that produces Hot Cheetos. Frito Lay requires that each large bag of Hot Cheetos should have a target weight of 11.9 ounces. A scale weighs each bag of Hot Cheetos as they are made and rejects any bag that is 0.4 ounces away from the target weight. The table below shows 5 different bags and how close to the target weight they are. Use the table to answer the questions below. Put an **A** for **Yes** and **B** for **No.**

Bag 1	Bag 2	Bag 3	Bag 4	Bag 5
-0.6 oz. less	1 oz. more	0.4 oz. more	-0.9oz. less	0 oz. away

a. More bags of Hot Cheetos will be sold than rejected, because more bags are less than 0.**4** ounces away from the target weight.   _____

b. More bags of Hot Cheetos will be rejected than sold, because more bags are more than 0.**4** ounces away from the target weight.   _____

c. Bag 4 weighs exactly the target weight of 11.**0** ounces.   _____

d. Bag 2 will be rejected, because it weighs 12.**9** ounces, because you take the target weight and add 1 ounce more to determine its total weight.   _____

e. **Graph and label** each bag on the number line below. Remember, 0 represents the target weight set by Frito Lay
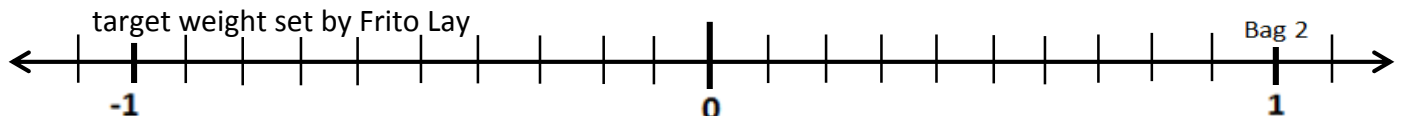
3. The Coco Cola company makes bottles of powerade that weigh 16.9 ounces. There is a scale that measures the weight of the powerade bottles. The scale is calibrated to show how close a bottle weighs to the target weight. It will reject any bottles that are more than 0.9 ounces away from the target weight. The scale will display:

- a positive number if the bottle is over 0.9 ounces
- a negative number if the bottles is under 0.9 ounces
- a zero will appear if the bottle is exactly 16.9 ounces

Which bottles will be rejected by the scale? <u>Use the number line below to demonstrate where each bottles would be on the number line.</u> Then select all that apply.

a. A bottle with a reading of -0.9

b. A bottle with a reading of 1.2 ounces

c. A bottle with a reading -1.5

d. A bottle with a reading 0

e. A bottle with a reading of 16.9
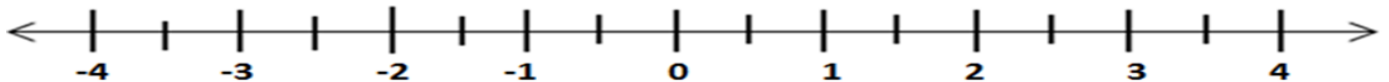
4. Mindy made the table below and recorded the change in her weight over 7 weeks.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
-5	-2	0	+5	-3	+0.5	-6

Look at each statement below. Can it be supported by the data in the table? Select *Yes* or *No* for each.

a. Mindy gained more weight in more weeks than she lost because the digit 5 is the greatest digit and is positive.   *Yes* or *No?*

b. Mindy gained weight each week, because she is getting older.   *Yes* or *No?*

c. Mindy lost weight in every week, because she is exercising and becoming healthier.   *Yes* or *No?*

d. Mindy lost weight in more weeks than she gained weight, because there are more negative numbers than there are positive numbers.   *Yes* or *No?*

Mindy didn't gain or lose any weight in Week 3.   *Yes* or *No?*