

**Hawk Mastery 14**

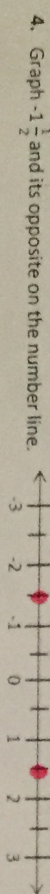
name: \_\_\_\_\_ period: \_\_\_\_\_ house: \_\_\_\_\_

**READ EACH QUESTION CAREFULLY. SHOW ALL WORK WHEN NEEDED.**

- Write the integer that represents each situation below.
  - you lose \$42 in a contest -42
  - a gain of 40 yards 40
  - 45 feet above sea level 45
  - a credit of \$20.15 20.15
  - 14 degrees above 0°C 14
  - a debt of \$2,500 -2500

2. Jeremy wrote down a number that is the opposite of -3. What number did he write down? 3

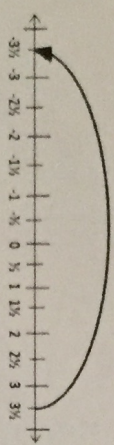
3. Austin wrote down the number that is the opposite of the opposite of 4. What number did he write? 4



5. Look at each number below. Is it located on the opposite side of 0 on the number line from the opposite of -3? Circle Yes or No for each.

- |         |                                      |                                     |
|---------|--------------------------------------|-------------------------------------|
| a. 0    | Yes <input checked="" type="radio"/> | No <input type="radio"/>            |
| b. -7   | Yes <input checked="" type="radio"/> | No <input type="radio"/>            |
| c. 3    | Yes <input type="radio"/>            | No <input checked="" type="radio"/> |
| d. -2   | Yes <input checked="" type="radio"/> | No <input type="radio"/>            |
| e. 18   | Yes <input type="radio"/>            | No <input checked="" type="radio"/> |
| f. 0.25 | Yes <input type="radio"/>            | No <input checked="" type="radio"/> |

6. What is shown on the number line?



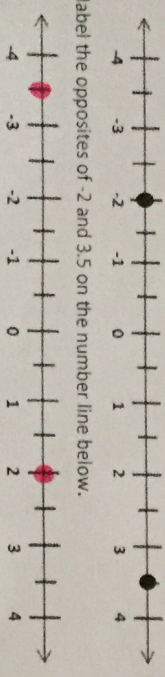
7. Rawlings is a company that makes baseballs for professional baseball teams. Current baseball rules state that a professional baseball must weigh 145 grams and will reject any baseballs that are more than 3.5 grams away from the target weight. The scales at Rawlings are calibrated to show how close each baseball weighs to the target weight of 145 grams. The scale will display:

- A positive number if the baseball weighs over 145 grams
- A negative number if the baseball weighs under 145 grams
- Zero if the baseball weighs exactly 145 grams

Which baseballs will be rejected by the scale? Select all that apply.

- A baseball with a scale reading of  $-4.2$  grams
- A baseball with a scale reading of 1.6 grams
- A baseball with a scale reading of  $-0.15$  grams
- A baseball with a scale reading of 145 grams
- A baseball with a scale reading of 3.55 grams

8. Andrew drew this number line with the points -2 and 3.5.



Part A  
Graph and label the opposites of -2 and 3.5 on the number line below.

**Part B**

Andrew made these two statements:

- The number 2 is its own opposite.
- The opposite of the opposite of 3.5 is 3.5.

Fill in the blanks below to explain whether the statements are true or false.  
The opposite of 2 is -2. The only number that is its own opposite is 0. The first statement Andrew made is False.

The opposite of 3.5 is -3.5, so the opposite of the opposite of 3.5 is equal to the opposite of -3.5 which is 3.5. The second statement is True.

9. 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
<u>6</u> -3	<u>4</u> -2	<u>0</u> 0	<u>9</u> +1	<u>4</u> -4	<u>9</u> +0.5	<u>2</u> -2%

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

- Mindy gained more weight in more weeks than she lost because the digit 5 is the greatest digit and is positive. Yes or No?
- Mindy gained weight each week, because she is getting older. Yes or No?
- Mindy lost weight in every week, because she is exercising and becoming healthier. Yes or No?
- 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?

10. Barcel is the food company that produces Hot Takis. Barcel requires that each large bag of Hot Takis should have a target weight of 9.9 ounces. A scale weighs each bag of Hot Takis as they are made and rejects any bag that is 0.6 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
<u>9</u> 0.9 oz. less	<u>4</u> 1 oz. more	<u>0.2</u> 0.2 oz. more	<u>0</u> 0 oz. away	<u>0.5</u> 0.5 oz. less

- More bags of Hot Takis will be rejected than sold, because more bags are more than 0.6 ounces away from the target weight. B
- More bags of Hot Takis will be sold than rejected, because more bags are less than 0.6 ounces away from the target weight. A
- Bag 4 weighs exactly the target weight of 9.9 ounces. A
- Bag 2 will be rejected, because it weighs 10.9 ounces, because you take the target weight and add 1 ounce more to determine its total weight. A

Graph and label each bag on the number line below. Remember, 0 represents the target weight set by Barcel.

