Name: _____ 8th Math – Homework Week 25

1. Write an inequality to represent the situation below.

Matthew and Mark are conducting a science experiment. Matthew has a plant that is 15 inches tall and grows $\frac{2}{3}$ inches a day. Mark's plant grows $\frac{3}{4}$ inches a day, but it is only 10 inches tall. After how many days will Matthew's plant be the same or shorter than Mark's plant?

2. A soccer ball has a diameter of 8.65 inches. How many cubic inches of air are inside of a soccer ball?

3. A box of chocolates is being wrapped in plastic to preserve freshness. If the box has the following dimensions, how many square inches of plastic would be needed to cover the entire box?

5 in.

7 in.

4 in.
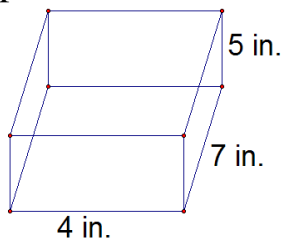
4. Which of the following rules represent the transformation below?
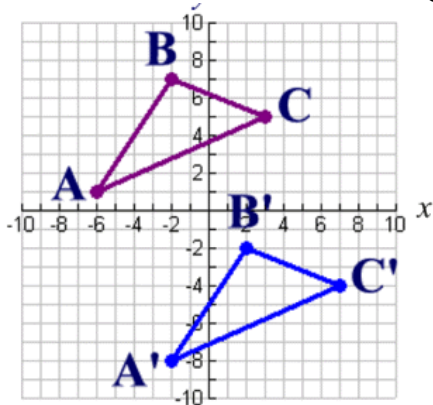
a. $(x, y) \rightarrow (4x, 9y)$
b. $(x, y) \rightarrow (x - 4, y + 9)$
c. $(x, y) \rightarrow (x + 4, y - 9)$
d. $(x, y) \rightarrow (x + 4, y + 9$

5. At a certain point in a race, the following people have completed the given amount of the race. Write the names of the runners in order from the greatest amount of the race run to the least amount.

Peter	James	John	Andrew	Mary
$\sqrt{.64}$	$\sqrt{.49}$	$\frac{7}{8}$	43%	$\frac{2}{3}$

6. A 25-ft. ladder is leaning against a building. The base of the ladder is 8 ft. from the building. How far up the building is the ladder leaning?

7. Jude has $30,000 to invest in a savings account. He chooses an account that earns 1.2% interest compounded annually. If he keeps the account for 3 years, how much more money will he earn in interest?

8. Write a linear equation in slope-intercept form for the table.

x, number of weeks	y, weight
1	148
2	146
4	142
7	136

Use the griddables to answer #9 and #10.

9. Find the slope from the graph.
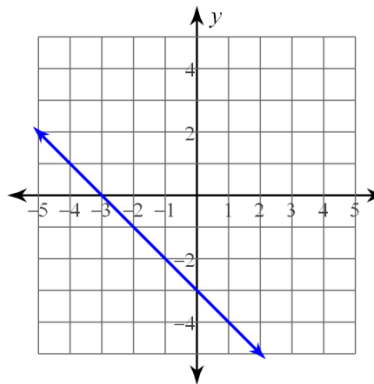
10. What value from the list below is preventing the relation from being a function?   {(-2, 3), (-1, 4), (0, 3), (1, 4), (-2, -5), (6, -2), (8, 3)}