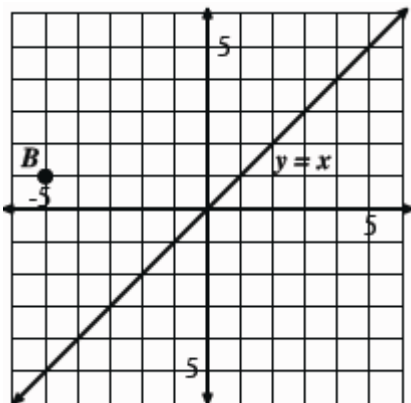


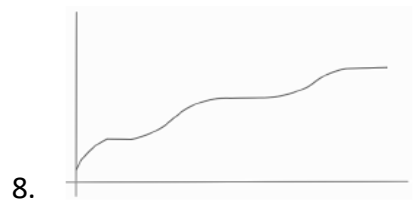
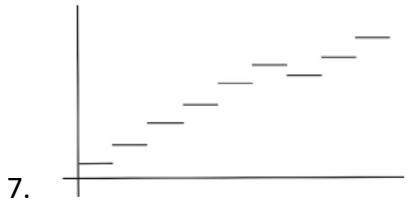
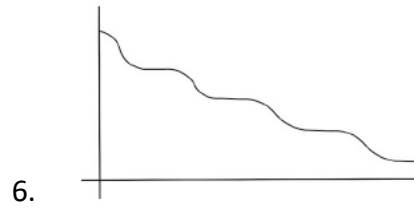
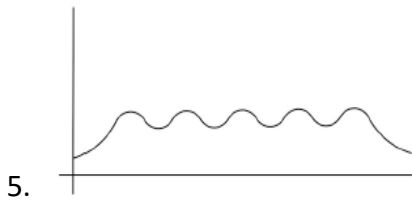
Math 1 – Released Items

1. A person was modeling a growing population with a growth factor of 1.5 using pennies. They started with 4 pennies and flipped all 4 pennies. For every penny that landed heads up another penny was added to the pile. Then, the new pile of pennies are all flipped and again for each one landing on heads another penny was added. The process is repeated several more times. Which of the below would the most reasonable number of pennies to be expected to be in the pile after pennies were added just after the 5th flip?
 - a. 6 pennies
 - b. 14 pennies
 - c. 30 pennies
 - d. 100 pennies
2. The function $h = -5t^2 + 20t + 0.75$ describes the height of a baseball “ h ” in meters, as a function of time “ t ” in seconds, from the instant the ball is hit. Ricardo solved the equation $h = -5t^2 + 20t + 0.75 = 0$. What did the positive root represent?
 - a) the initial height of the ball
 - b) the time it takes for the ball to hit the ground
 - c) the time it takes for the ball to reach a maximum height of 20.75 meters
 - d) the maximum height of the ball
3. Brazil is the most populous country in South America. In 2016, its population was about 208 million people. It was growing at a rate of about 1% per year. Nigeria is the most populous country in Africa. Its 2016 population was about 186 million. It was growing at a rate of about 2.6% per year. Assuming that these growth rates continue, in what year will Nigeria’s population first be greater than Brazil’s?
 - a. 2017
 - b. 2021
 - c. 2024
 - d. 2028
4. Reflect point B over the line $y = x$, label as B' . Then rotate point B' 180° counter clockwise about the origin, label as B'' . Finally, translate point B'' down 3 and right 4 units, label as B''' . What will be the y coordinate of B''' ?



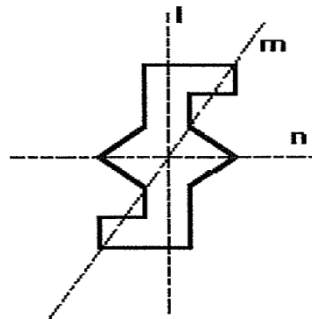
- a. 2
- b. -2
- c. -1
- d. 1

For each graph given match it to the contextual description that fits best.



- The amount of money in a savings account where regular deposits and some withdrawals are made.
- The temperature of the oven on a day that mom bakes several batches of cookies.
- Watermelons are delivered to a farmer's market every Saturday morning. The number of watermelons available for sale on Thursday.
- The amount of mileage recorded on the odometer of a delivery truck over a time period.

9. Which of the following lines in the picture are lines of symmetry of the given figure?



- Only l
 - No line of symmetry
 - Only m
 - l and n
10. Two sides of an equilateral triangle have lengths $2x - 2$ and $3x - 6$. Which of $10 - x$ or $6x + 5$ could be the length of the third side?
- neither $10 - x$ nor $6x + 5$
 - $10 - x$ only
 - both $10 - x$ nor $6x + 5$
 - $6x + 5$ only