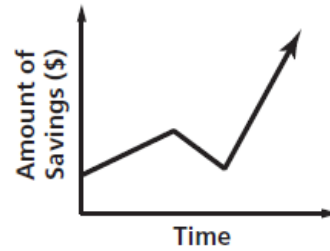
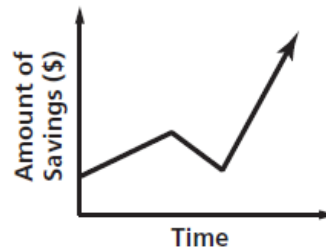


- 72** The graph represents Chiavo's savings account over several years. Describe what is happening in the graph. [3]



- 73** Predict the effect(s) on the graph of $y = 9x^2 - 2$ when the graph is translated up 3 units. [1]
- 74** Mr. Watson took a science class on a field trip to Riverbanks Zoo and Botanical Gardens in Columbia. Admission for a group of 4 adult chaperones and 15 students cost \$81. Admission for a second group of 6 adult chaperones and 20 students cost \$117.50. Write a system of equations you could use to find the price of a ticket for an adult and the price of a ticket for a student. Identify variables. Do not solve the problem. [3]
- 75** A boat repair shop in Beaufort charges \$60 to power wash the bottom of a 60-foot vessel and then \$2 for each additional foot up to 80 feet. They make a graph to show their charges for 1 to 30 additional feet. If they decide to offer a special of \$1.50 for each additional foot, describe in words how their graph will change and how it will remain the same. [4]

- 72 The graph represents Chiavo's savings account over several years. Describe what is happening in the graph. [3] **I.B.3.**



Sample answer: Chiavo opens the account with a deposit. His savings grow slowly either from interest or more deposits. He then withdraws some money from the account. After that, he deposits more money into the account and it continues to grow at a faster rate than earlier.

- 73 Predict the effect(s) on the graph of $y = 9x^2 - 2$ when the graph is translated up 3 units. [1] **III.A.3.**

Sample answer: The vertex of the graph will change from $(0, -2)$ to $(0, 1)$.

- 74 Mr. Watson took a science class on a field trip to Riverbanks Zoo and Botanical Gardens in Columbia. Admission for a group of 4 adult chaperones and 15 students cost \$81. Admission for a second group of 6 adult chaperones and 20 students cost \$117.50. Write a system of equations you could use to find the price of a ticket for an adult and the price of a ticket for a student. Identify variables. Do not solve the problem. [3] **II.D.1.**

Sample answer: Let a = cost of adult ticket and let s = cost of student ticket.

$$4a + 15s = 81$$

$$6a + 20s = 117.5$$

- 75 A boat repair shop in Beaufort charges \$60 to power wash the bottom of a 60-foot vessel and then \$2 for each additional foot up to 80 feet. They make a graph to show their charges for 1 to 30 additional feet. If they decide to offer a special of \$1.50 for each additional foot, describe in words how their graph will change and how it will remain the same. [4] **II.B.6.**

Sample answer: The slope of the graph will change from 2 to 1.5, but the y-intercept will remain the same at \$60.