1. Lake Aid is an annual benefit talent show produced by the students of Wilde Lake High School to raise money for the local food bank. Several of the show organizers researched the possibility of selling DVDs f the show to increase donations to the food bank. They would have to pay for recording of the show and for production of the DVDs. The **cost, C (in dollars)** would depend on the **number of DVDs ordered, n**, according to the rule **C = 150 + 2n**

a. Use the function rule to complete this table of sample (*n*, *C*) values:

#of DVDs (n)	0	1	2	3	4	5	10	20	50
Cost (C)									

b. Graph the data a piece of graph paper

c. **i)** How much will the DVDs cost if they decide to not have any DVDs made?

ii) How can this information be seen in the rule **C = 150 + 2n**

iii) How can this information be seen In **the table** of sample (*n*, *C*) values?

iv) How can this information be seen In **the graph**?

d. i) How much does each additional DVD made cost?

ii) How can this information be seen in the rule **C = 150 + 2n**

iii) How can this information be seen in the **table**?

iv) How can this information be seen in the In the **graph**?

e. Write a recursive rule for the situation described above.

2. Lake Aid is an annual benefit talent show produced by the students of Wilde Lake High School to raise money for the local food bank. Proceeds from ticket sales, after security and equipment rental fees are paid, are donated to the local food bank. Once the ticket price was set, organizers determined that the proceeds, **P (in dollars),** would depend on **the number of tickets sold, t,** according to the rule
P = 6t - 400

b. Use the function rule to complete this table of sample (*t*, *P*) values:

#tickets sold (t)	0	1	2	3	4	5	10	20	50
Proceeds (P)									

b. Graph the data a piece of graph paper

c. **i)** How much money will be made or lost if no tickets are sold to the event?

ii) How can this information be seen in the rule **P = 6t - 400**

iii) How can this information be seen In **the table** of sample (*t*, *P*) values?

iv) How can this information be seen In **the graph**?

d. i) How much does each ticket cost?

ii) How can this information be seen in the rule **P = 6t - 400**

iii) How can this information be seen in the **table**?

iv) How can this information be seen in the In the **graph**?

e. Write a recursive rule for the situation described above.

3. Lake Aid is an annual benefit talent show produced by the students of Wilde Lake High School to raise money for the local food bank. The organizers of the event surveyed students to see how ticket price would affect the number of tickets sold. The results of the survey showed that the **number of tickets sold, T,** could be predicted from the **ticket price, p,** (in dollars) using the rule **T = 950 – 75p**.

c. Use the function rule to complete this table of sample (*p*, *T*) values:

Ticket price(p)	0	1	2	3	4	5	10	20	50
#of tickets sold (T)									

b. Graph the data a piece of graph paper

c. **i)** How many tickets would be sold if the ticket price was $0?

ii) How can this information be seen in the rule **T = 950 – 75p**

iii) How can this information be seen In **the table** of sample (*t*, *P*) values?

iv) How can this information be seen In **the graph**?

d. i) How many fewer tickets will be sold for every $1 the price is raised?

ii) How can this information be seen in the rule **T = 950 – 75p**

iii) How can this information be seen in the **table**?

iv) How can this information be seen in the In the **graph**?

e. Write a recursive rule for the situation described above.