

- 1) The table shows the cost of visiting a working ranch for one day and night for different numbers of people.

Number of	4	6	8	10	12
Cost (dollars)	250	350	450	550	650

- a) Use the data table to decide if the situation be modeled by a linear equation. Explain.
- b) What is the slope and what does it represent?
- c) Write an equation that gives the cost as a function of the number of people in the group.
- 2) The table shows the cost of a catered lunch buffet for different numbers of people.

Number of people	Cost (dollars)
12	192
18	288
24	384
30	480
36	576
42	672

- a) What is the slope and what does it represent?
- b) Write an equation that gives the cost of the lunch buffet as a function of the number of people attending.
- c) What is the cost of a lunch buffet for 120 people?
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- 3) The table shows the number of active woodpecker clusters in a part of the De Soto National Forest in Mississippi.

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Active Clusters	22	24	27	27	34	40	42	45	51

- Use technology to make a scatter plot of the data. Represent the x-axis as the number of years **since 1990**.
- Find the slope and describe what it represents.
- Use technology to determine an equation that models the number of active clusters as a function of the number of years since 1990.
- Use the equation to determine the number of active clusters in the year

- 4) the table shows the weight of an alligator at various times during a medical experiment.

Weeks	0	9	18	27	34	43	49
Weight in pounds	6	8.6	10	13.6	15	17.2	19.8

- Use technology to make a scatter plot of the data and determine the equation of the line of best fit.
- Determine the slope of this linear function and explain what the slope means in the context of the data.
- Predict the weight of the alligator at week 52