

2. The information in the table shows the Olympic 500-meter Men's Gold Medal Speed Skating times since 1980.

a. Find the line of best fit. _____

b. Estimate the 500-meter time for the 2012 Olympics.

Year	Time (s)
1980	422
1984	432
1988	404
1992	420
1994	395
1998	382

3. The information in the table shows sales for a certain retail department store (in billions of dollars)

Year	1980	1985	1990	1994	1995	1996	1997	1998
Sales	86	126	166	217	231	245	261	279

Enter data into Desmos table

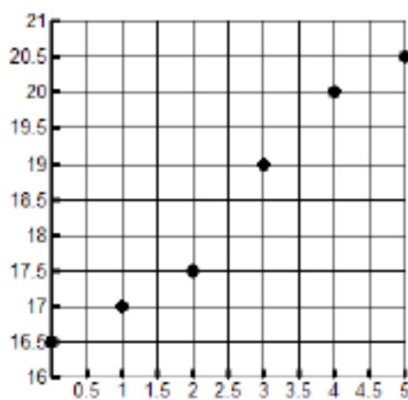
a. Find the line of best fit. _____

b. Estimate the store sales for the year 2008.

c. What does the slope represent?

d. What does the y-intercept represent?

4. The scatter below shows the number of dollars (in billions) spent on books and maps in the US from 1990 through 1995.



a. Find the line of best fit.

$$y=0.87x + 16.24$$

b. Estimate the amount spent on books in 2005

$$y= 0.87(15) + 16.24$$

29.29 billion dollars

c. What does the slope represent?

the increase in money spent per year

Get ordered pairs from the graph

(0,16.5), (1,17), (2,17.5), (3,19), (4,20), (5,20.5)

Enter ordered pairs into Desmos table

Applying Line of Best Fit WS

Age of a Car (years), x	1	2	3	4	5	6	7	8
Value (thousands), y	\$24	\$21	\$19	\$18	\$15	\$12	\$8	\$7

- 1) What is the line of best fit?
- 2) What is the slope? What does it represent?
- 3) Predict the value of a car that is 3 and a half years old.
- 4) Predict the age of a car worth \$10,000
- 5) Interpret the y-intercept
- 6) Correlation coefficient? How would you describe the relationship between the two sets of data?

Height (in.)	67	70	73.5	75	78	66
Shoe Size	8.5	9.5	11	12	13	8

- 7) Determine the line of best fit for the data
- 8) What is the slope? What is the meaning of the slope in the context of the problem?
- 9) What is the y-intercept? What is the meaning of the y-intercept in the context of the problem?
- 10) What is the predicted shoe size of a 74 inch tall man?
- 11) How tall is the man whose shoe size is 12.5?
- 12) Correlation Coefficient? How would you describe the relationship between the two sets of data?