Hours Spent Studying	Math SAT Score
4	390
9	580
10	650
14	730
4	410
7	530
12	600
22	790

1. Make a scatter plot and sketch what you see on the screen.

2. Find either a Linear or Quadratic Regression equation, whichever one seems to be a better fit for the data

3. Use this equation to find the # of hours studied if the SAT score was 200.

4. If the score was 450 find the number of hours studied.

x (advertising expenditures)	y (firm's revenue)
20	6,101
22	6,222
25	6,350
25	6,378
27	6,453
28	6,423
29	6,360
31	6,231

5. Make a scatter plot and sketch what you see on the screen.

6. Find either a Linear or Quadratic Regression equation, whichever one seems to be a better fit for the data

7. Find the firm's revenue if their expenditures were 40.

8. Find the firm's expenditures if their revenue was 5000.

ANSWERS

Hours Spent Studying	Math SAT Score
4	390
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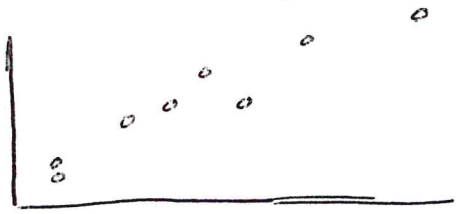
22	790

1. Make a scatter plot and sketch what you see on the screen.



2. Find either a Linear or Quadratic Regression equation, whichever one seems to be a better fit for the data

LINEAR REG. EQ. $y = 22.24x + 357.04$

3. Use this equation to find the # of hours studied if the SAT score was 200.

$y = 200$ $\quad 200 = 22.24x + 357.04$

$x = -7.06$ → this # is correct but is not possible in this situation!

4. If the score was 450 find the number of hours studied.

$y = 450$ $\quad 450 = 22.24x + 357.04$

$x = 4.18$

x (advertising expenditures)	y (firm's revenue)
20	6,101
22	6,222
25	6,350
25	6,378
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5. Make a scatter plot and sketch what you see on the screen.

6. Find either a Linear or Quadratic Regression equation, whichever one seems to be a better fit for the data

QUAD REG EQ! $y = -7.76x^2 + 411.88x + 942.72$

7. Find the firm's revenue if their expenditures were 40.

$x = 40$ $\quad 5001.9$ Revenue

8. Find the firm's expenditures if their revenue was 6000.

$y = 6000$ $\quad 6000 = -7.76x^2 + 411.88x + 942.72$

use Quad Formula or a graph

$x = 33.79$ or 19.29