**Television, Homework and Test Scores**

Is the amount of television students watch related to how much homework they complete or how well they score on tests? Scatter plots and trend lines can help answer these questions.

1. The following data were collected on nine students in an algebra class.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Hours of TV watched per week | 32 | 13 | 28 | 19 | 11 | 21 | 15 | 11 | 15 |
| Percent of homework completed | 58 | 82 | 65 | 87 | 98 | 78 | 75 | 92 | 75 |
| Test score | 66 | 85 | 75 | 85 | 100 | 88 | 85 | 90 | 90 |



1. Create a scatter plot that compares

the hours of TV watched per week (*x*)

to the percent of homework

completed (*y*).

1. Draw a trend line that represents

the data.

1. Write an equation for the trend line.
2. What is the slope of the trend line? What does the slope mean in context of this problem?
3. Use your equation to predict the percent of homework completed by a student who watches 24 hours of television in a week.
4. The prediction in part (e) was an interpolation. What does interpolation mean?
5. Use the set of data collected on nine students in an algebra class.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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1. Create a scatter plot that compares

the hours of TV watched per week (*x*)

to the test score (*y*).

1. Draw a trend line that represents

the data.

1. Write an equation for the trend line.
2. What is the slope of the trend line? What does it mean in the context of this problem?
3. Use your equation to predict the test score of a student who watches 40 hours of TV in a week.
4. The prediction in part (e) was an extrapolation. What does extrapolation mean?
5. Use the set of data collected on nine students in an algebra class.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| Percent of homework completed | 58 | 82 | 65 | 87 | 98 | 78 | 75 | 92 | 75 |
| Test score | 66 | 85 | 75 | 85 | 100 | 88 | 85 | 90 | 90 |



1. Create a scatter plot that compares

the percent of homework completed

(*x*) to the test score (*y*).

1. Draw a trend line that represents

the data.

1. Write an equation for the trend line.
2. What is the slope of the trend line? What does it mean in the context of this problem?
3. A student scored an 80 on the test. Use your equation to predict the percent of homework this student completed.
4. Is the prediction in part (e) an interpolation or an extrapolation? Explain.
5. Use the results from questions 1–3 to complete this statement:

“The more a student watches television,