

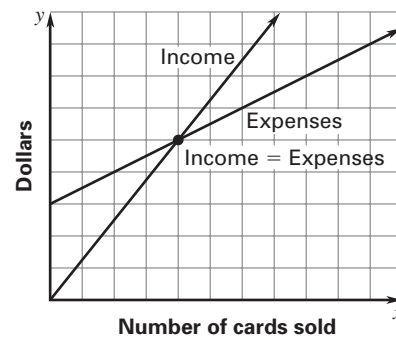


Objective 1 TEKS A.1.E Review

A.1.E Interpret and make decisions, predictions, and critical judgments from functional relationships.

You can use tables, graphs, and equations to organize and summarize data so you can make decisions and predictions from the data.

A greeting card company models its income and its expenses with linear functions. The company knows that income will equal expenses at the point where the graphs of the two lines intersect.



EXAMPLE

The table shows falling temperatures during the early afternoon. What do you predict the temperature will be at 7:00 in the evening?

Time	°F
12:00	71
1:00	68
2:00	67
3:00	65

The temperature falls 6 degrees in 3 hours, or 2 degrees per hour on average. If the temperature continues to fall at this rate, it will drop 4×2 , or 8 more degrees during the next 4 hours.

A good prediction, based on this rate, is that the temperature will be $65^\circ - 8^\circ$, or 57°F at 7:00 P.M. Remember, however, that this is only a prediction.

YOU DO IT

This table shows rising temperatures during the morning hours. What do you predict the temperature will be at 1:00 P.M.?

Time	°F
8:00	64
9:00	67
10:00	72
11:00	73

- The temperature rises 9 degrees in 3 hours.
- That is 9 \div 3, or 3 degrees per hour.
- The temperature will rise 3 \times 2, or 6, more degrees during the next 2 hours if it continues rising at the same rate.

- At this rate, the temperature would be 79 °F at 1:00 P.M.
- Do you think the actual temperature might be different? Explain.

Yes; the actual temperature might be different

because the temperature may not increase at a constant rate. (Explanations will vary.)