

Try This 1 – 12 Possible Solutions

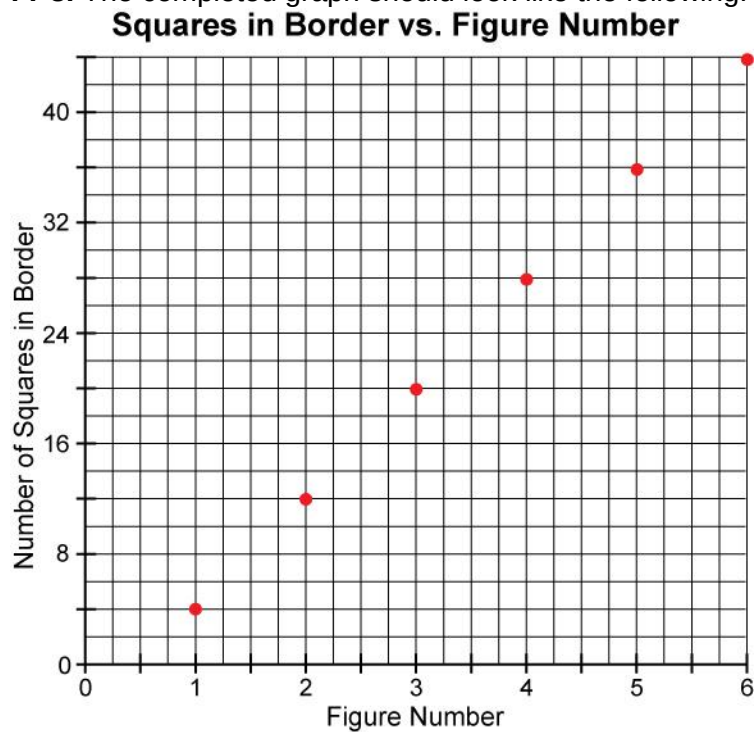
TT 1. The student's completed chart should look like the following.

Figure	Number of Squares in the Border
1	4
2	12
3	20
4	28
5	36
6	44

TT 2.

- The smallest number is 1; the largest number is 6.
- The smallest number is 4; the largest number is 44.
- The second statement makes more sense: The number of squares in the border depends on the figure number.

TT 3. The completed graph should look like the following.



TT 4. Answers may vary. This is a possible answer.

With every subsequent figure after the first one, eight more squares are added to the squares in the border.

TT 5. The student is asked to continue the table by adding Figure 7 and Figure 10.

Figure	Number of Squares in the Border
1	4
2	12
3	20
4	28
5	36
6	44
7	52
8	60
9	68
10	76

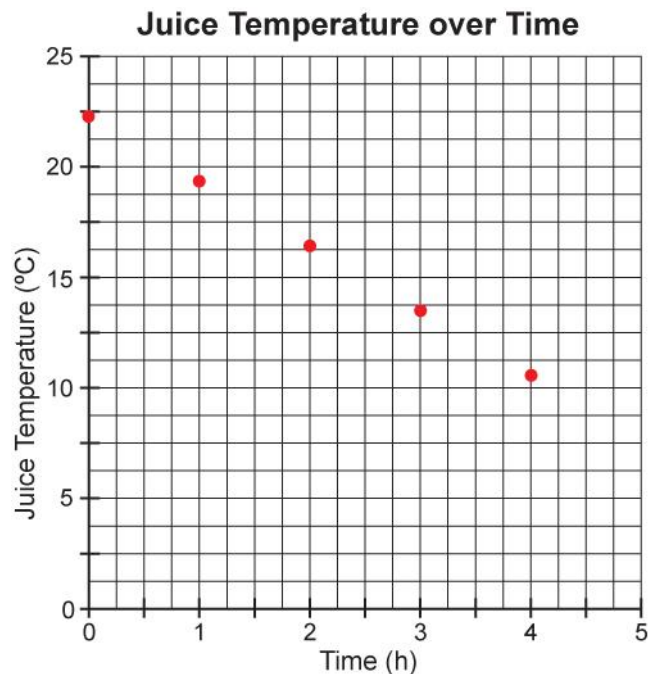
TT 6.

- The independent variable is the figure number, and the dependent variable is the number of squares in the border. The student should know this because the number of squares in the border depends on the figure number.
- The values of the independent variable are 1, 2, 3, 4, 5, and 6.
- The values of the dependent variable are 4, 12, 20, 28, 36, and 44.

TT 7.

- The smallest value of time is 0 h, and the largest value of time is 4 h.
- The smallest value of temperature is 11.48°C, and the largest value of temperature is 22.10°C.
- The second statement makes more sense: The juice temperature depends on the elapsed time.

TT 8. The completed graph should look like the following.



TT 9. As the time increases, the temperature decreases. The decrease in temperature is not consistent and is, in fact, a smaller decrease with each passing hour.

TT 10.

- a. A person could check the juice temperature after 2.5 hours by drawing a curve through the points and checking the temperature at time = 2.5 h.
- b. A person could check the elapsed time by drawing a horizontal line across the graph at 10°C. The x-coordinate of the point where the line intersects the curve (drawn in part a) will indicate the time elapsed.

TT 11.

- a. The temperature of the juice is the dependent variable since it depends on the amount of time it is allowed to sit in the refrigerator. The time, therefore, is the independent variable.
- b. All real numbers greater than or equal to zero are values of the independent variable.
- c. All real numbers less than 22.10°C and greater than the temperature of the refrigerator are values of the dependent variable. Typical fridge temperatures are between 1.7°C and 3.3°C.

TT 12. It is not appropriate to join the points in the graph in the graph titled “Squares in Border vs. Figure Number,” since the points in between plotted points bear no meaning. On the other hand, it is appropriate to join the points in the graph titled “Juice Temperature over Time” because the points in between have meaning. For example, it is possible to have a temperature of 14°C even though it is not one of the original points in the table. This temperature is reached somewhere between 2 and 3 hours from the beginning.