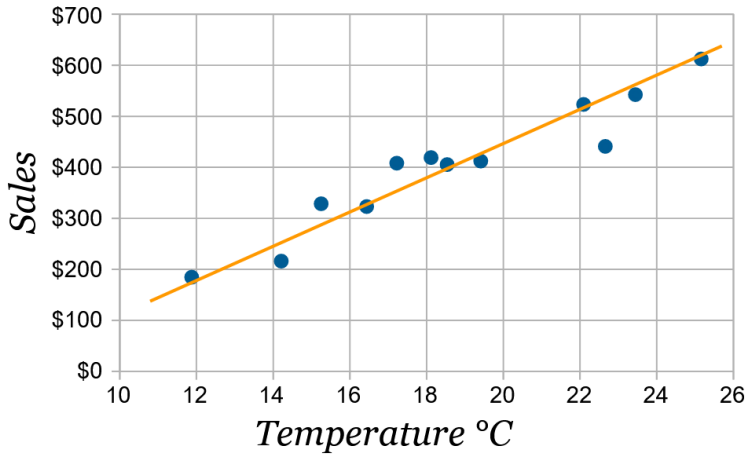
Module 14: Student Activity

Linear Equations In Practice

Through this activity, students will put linear equations into practice with real-world financial examples, such as calculating interest and analyzing investment returns. By the end of this exercise, students will be able to apply their understanding of linear equations to real-world financial scenarios and make informed decisions about their finances.

Part 1: Ice Cream Sales

Ari recorded the daily high temperature (in Celsius) and total sales from his ice cream shop for 12 days. He plotted the data on the graph below and drew a line of best fit.



1. **Does the data appear to have a correlation? If so, is it positive or negative?**

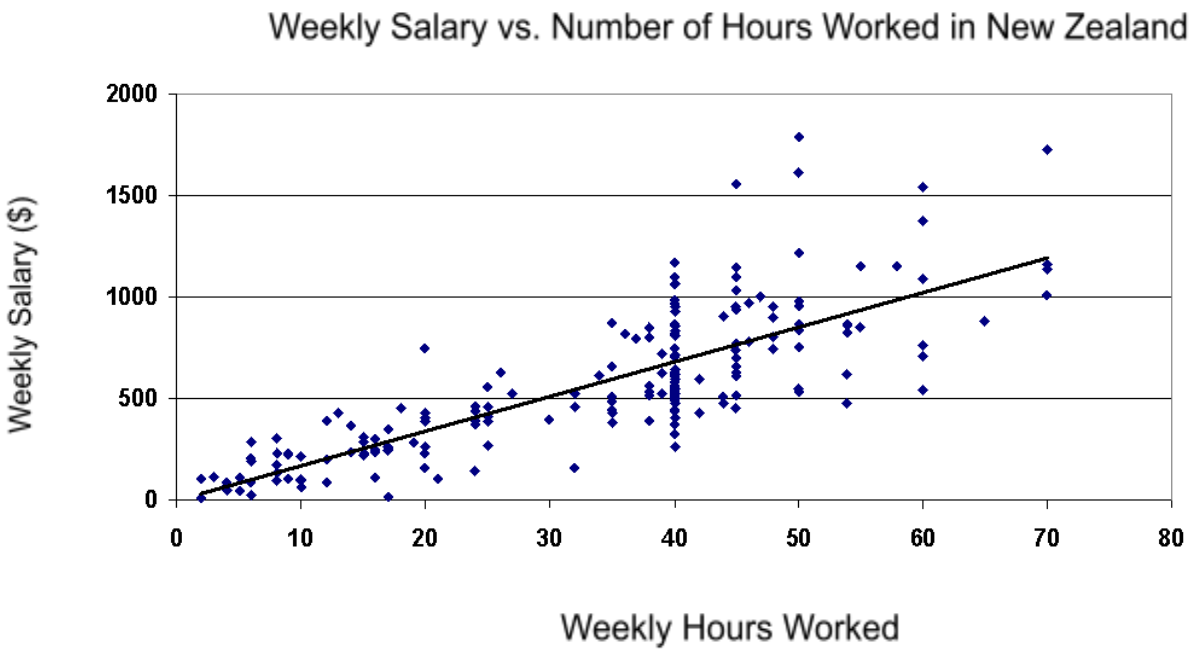
2. **Based on the line of best fit that Ari drew, how much money in sales should he expect when the temperature is 21℃?**

3. **In your own words, explain why it makes sense that this data has a correlation?**

4. **Create a scenario like Ari's ice cream shop that will have a negative correlation.**

Part 2: Real World Data

The following graph comes from real world salary data from a study in New Zealand. Inspect the graph then answer the following questions.



1. **What does it mean that there are multiple different y values at 40 hours worked?**

2. **What is the approximate slope of the line of best fit drawn in this graph? What does this mean?**

3. **There is not actually a fixed increase in salary based on the number of hours worked. What does our line of best fit tell us if not exactly how salary will increase?**