 MS-S4 Bivariate Data Analysis

Describing the strength of an association

Purpose

This resource can be used for two purposes:

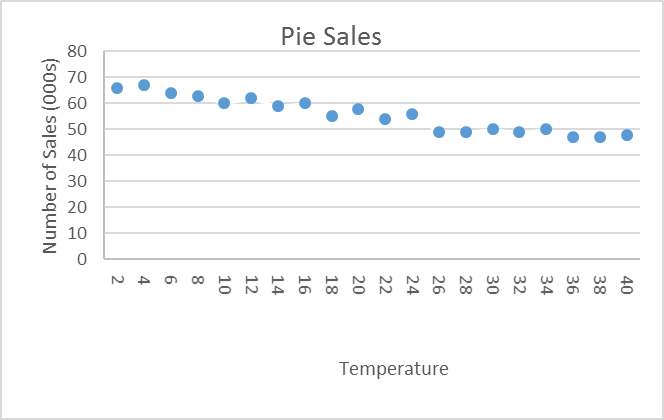
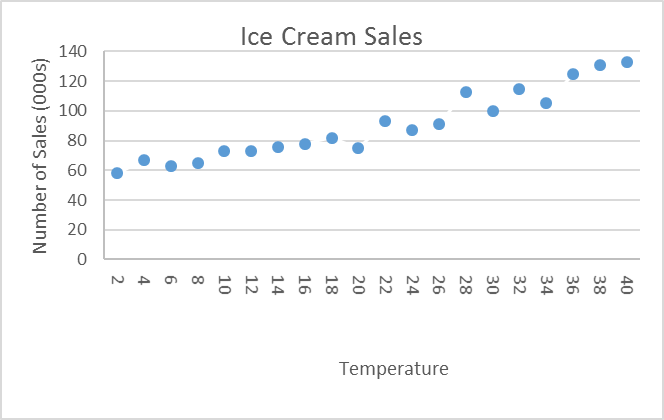
* To examine and then identify the strength and direction of an association.
* To relate the strength and direction to a correlation coefficient.

Method

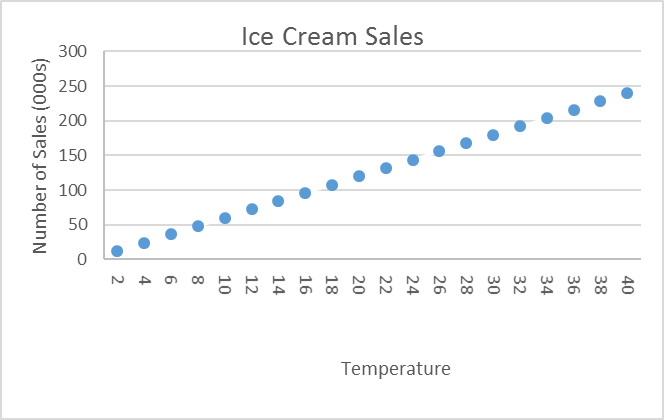
1. Class discussion around whether each association is positive or negative, and then the strength of each association.
2. View the correlation coefficients and see how they relate to the strength of an association.

Scatterplots

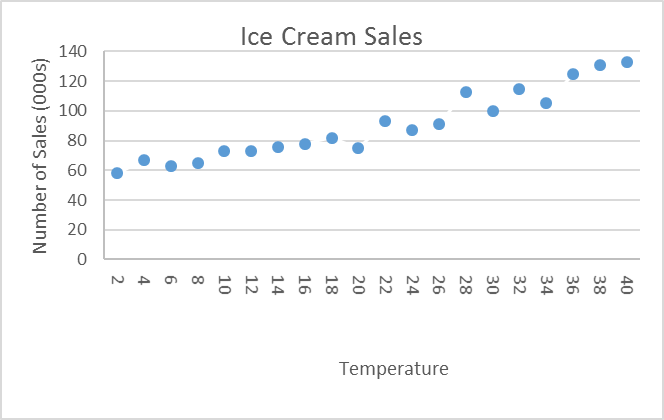
1. Which is a positive association and which is a negative association?



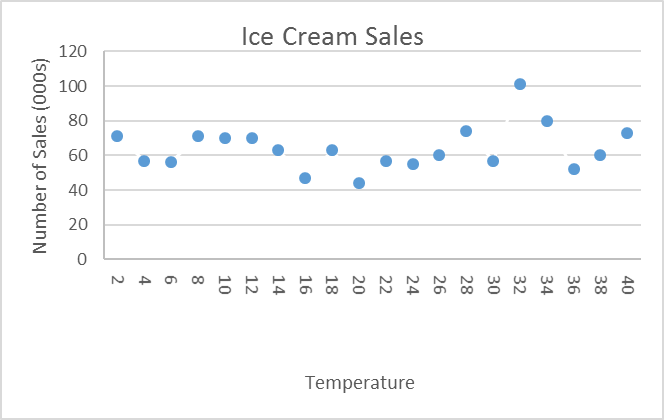
1. The following have a positive association. Is it weak, moderate, strong, or perfect in strength?



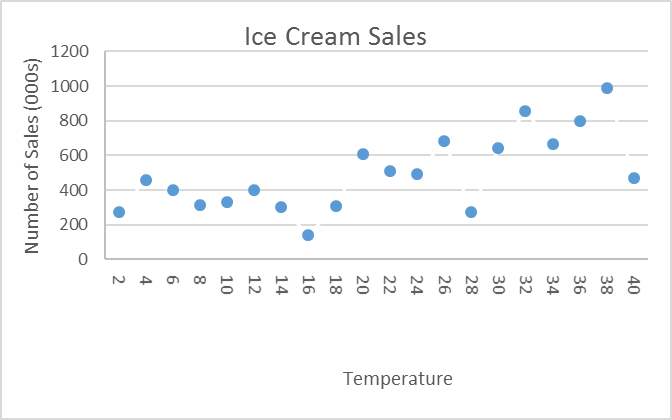
r = 1



r = 0.96

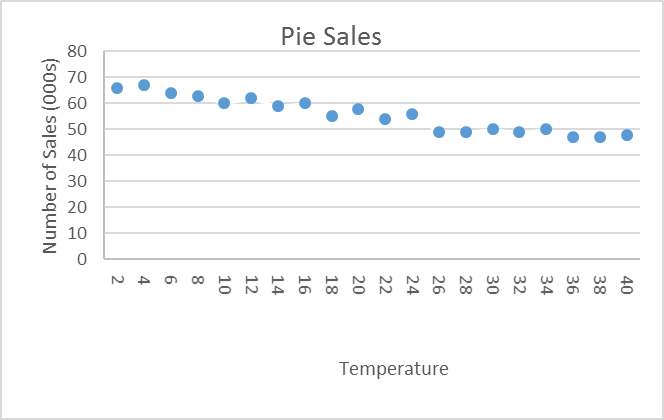


r = 0.17

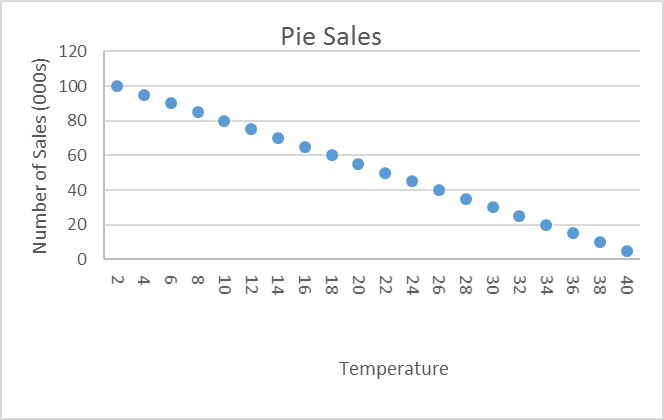


r = 0.69

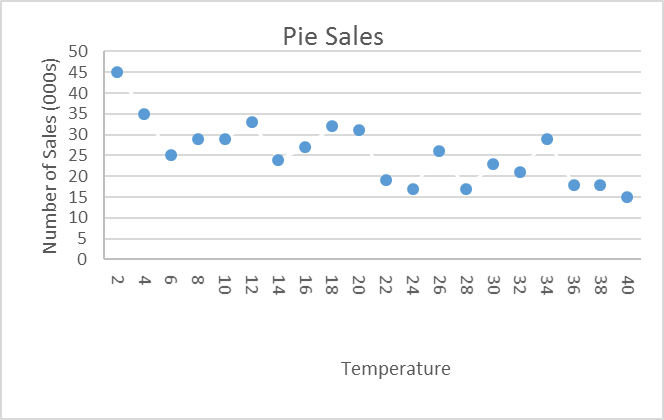
1. The following have a negative association. Is it weak, moderate, strong, or perfect in strength?



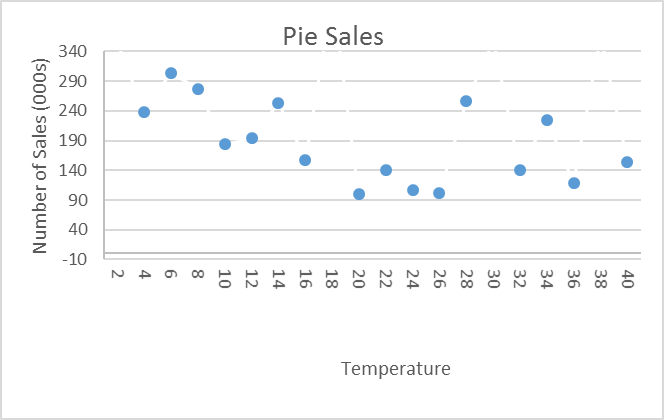
r = -0.96



r = -1



r = -0.74



r = -0.23