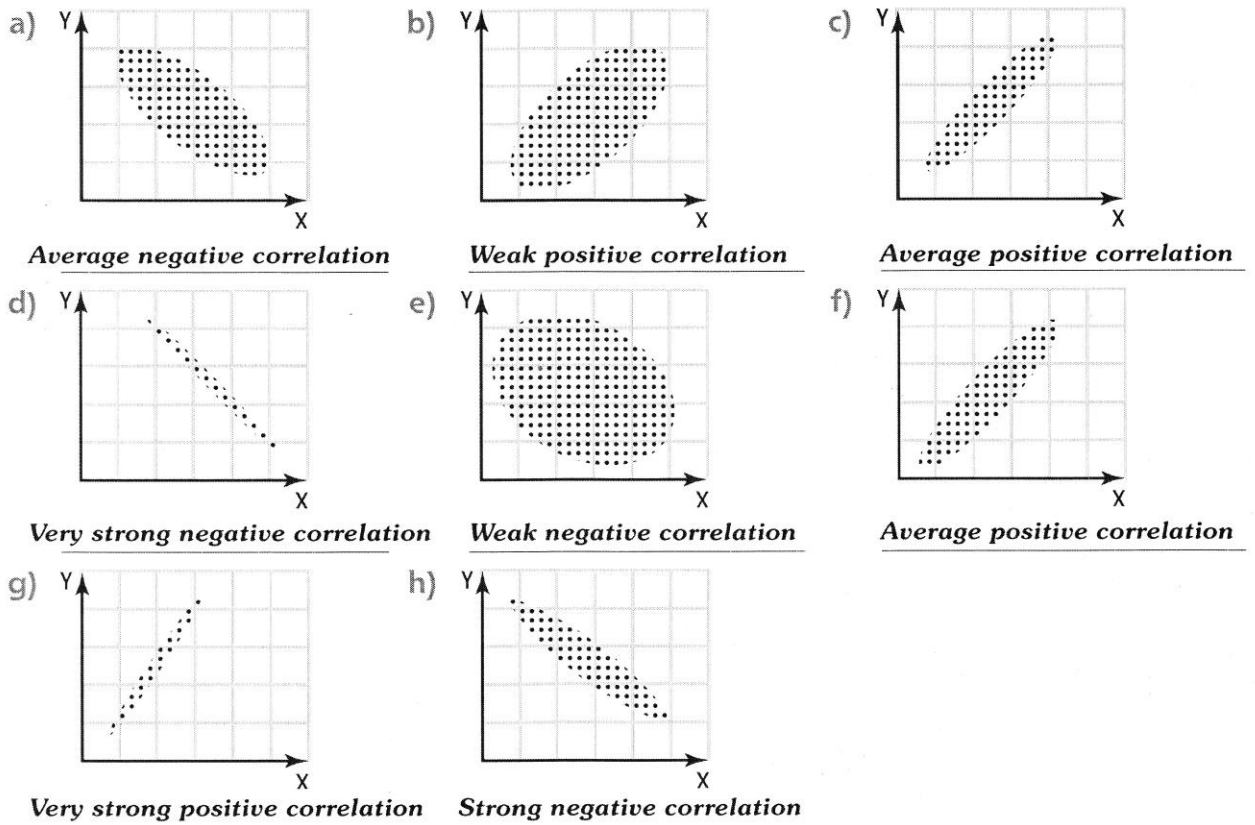


1. In each of the following situations, indicate whether the variables are correlated or not. If they are, indicate whether it is a positive or negative correlation.

- a) The number of hours preparing for an exam and the exam result. Positive correlation
- b) The time of running one 100 metres according to the age. Negative correlation
- c) The amount spent at the grocery store according to the age. Zero correlation
- d) The infant mortality rate and life expectancy. Negative correlation
- e) The annual salary according to the number of years of seniority. Positive correlation

2. In each of the following situations, indicate whether the linear correlation is weak, average, strong or very strong. Indicate the sign of the correlation.



3. Consider the set of children less than three years of age. The following variables are being studied: X “Child’s age”,  $Y_1$  “Child’s height”,  $Y_2$  “Father’s income” and  $Y_3$  “child’s number of hours of sleep per day”. When we want to predict the variables  $Y_1$ ,  $Y_2$  and  $Y_3$  as a function of the variable X, the variable X is called the **independent variable** and  $Y_1$ ,  $Y_2$  and  $Y_3$  are called the **dependent variables**.

a) For each of the following scatter plots, indicate the dependent variable.

