I. Administrative Stuff.

II. Read All EXAMPLES in BOOK & STUDY ALL Definitions.

ACTIVE STATS VOCAB vs PASSIVE STATS VOCAB.

A. In §3.2: \[ z = \frac{x - \overline{x}}{s} \]

\[ z_x = \frac{x - \overline{x}}{s_x} \]

\[ z_y = \frac{y - \overline{y}}{s_y} \]

B. In §3.3:

\[ \hat{y} = \alpha + b \bar{x} \]

\( \hat{y} \) intercept.

Slope of the reg. line

Predictive Value.

linear regression

Explanatory variable

\( y \) would be the response variable

2. (P122) (Passive Vocab) - Need to use on Course Compass.

Regression Formula:

1. Slope \( b = r \left( \frac{s_y}{s_x} \right) \)

2. \( y \)-int. \( \alpha = \overline{y} - b(\overline{x}) \)
Similar to problem #7 from HW12-3.3

\[ x = \text{midterm exam score} \quad \bar{x} = 79 \quad s_x = 5 \quad r = 0.73 \]
\[ y = \text{final exam score} \quad \bar{y} = 79 \quad s_y = 5 \]

\[ b = r \left( \frac{s_y}{s_x} \right) = 0.73 \left( \frac{5}{5} \right) = 0.73 \]

\[ a = \bar{y} - b \bar{x} = 79 - 0.73(79) = 21.33 \]

\[ \hat{y} = a + bx \quad \hat{y} = 21.33 + 0.73x \]

Note — I put Test #1 on Course Compass under "Homework." It will not count for you or against you — but I urge you to re-visit it & practice it so that you don’t forget.