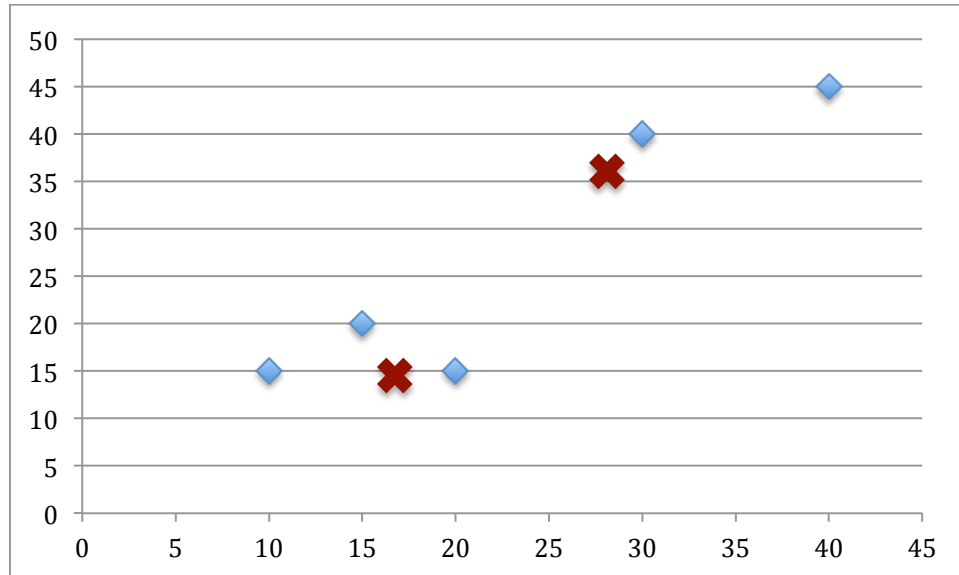


Answers to study questions on Location

1.

a:



b:

$$X_N^* = 28.75 \sim 29$$

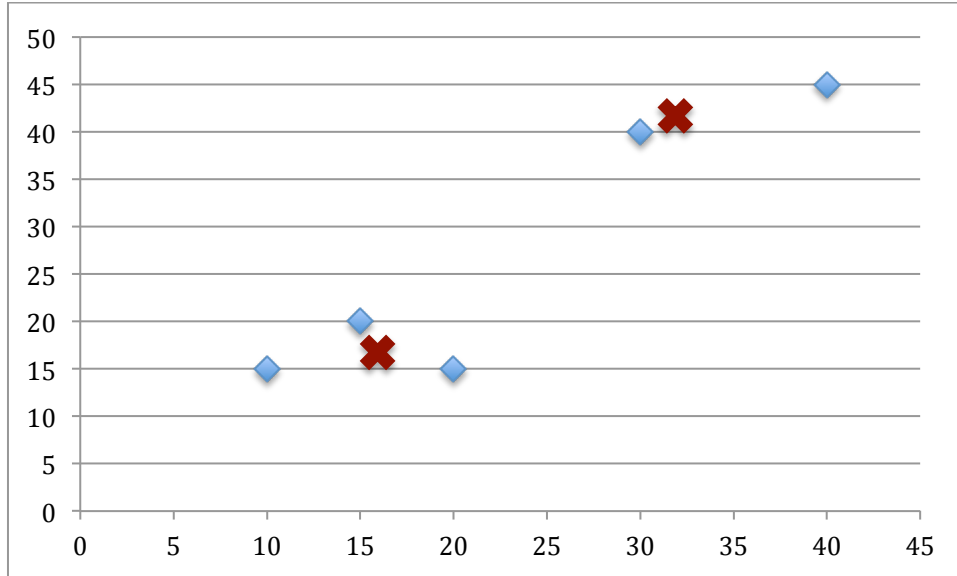
$$Y_N^* = 36.25 \sim 36$$

$$X_S^* = 16.67 \sim 17$$

$$Y_S^* = 15$$

$$\text{LD-score} = 785.5$$

C:



$$X_W^* = \frac{10 \times 10 + 15 \times 15 + 20 \times 20}{10 + 15 + 20} = 16.11 \sim 16$$

$$Y_W^* = \frac{15 \times 10 + 20 \times 15 + 15 \times 20}{10 + 15 + 20} = 16.67 \sim 17$$

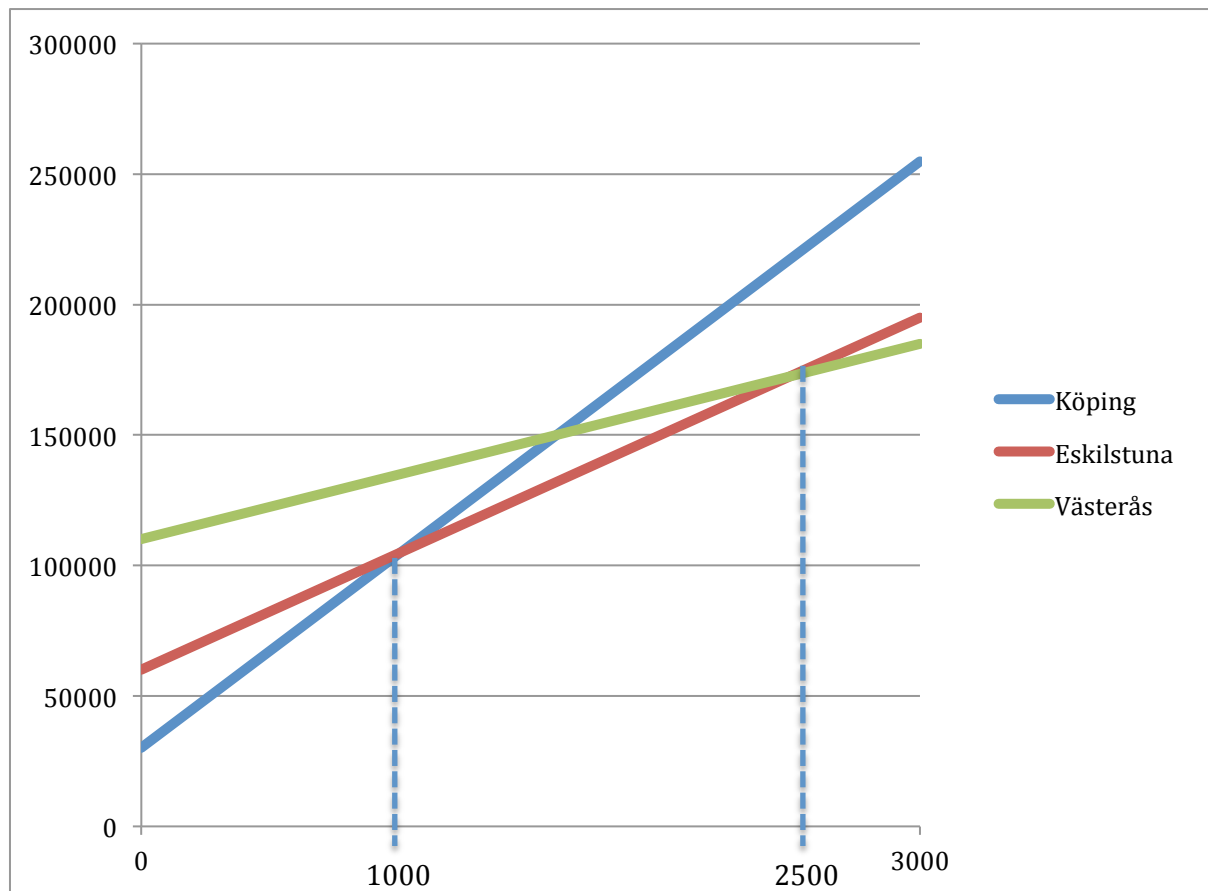
$$X_E^* = \frac{30 \times 30 + 40 \times 15}{30 + 15} = 33.33 \sim 33$$

$$Y_E^* = \frac{40 \times 30 + 45 \times 15}{30 + 15} = 41.67 \sim 42$$

LD-score = 433

Answer: The West - East division is the better with much lower LD-score

2.



Total costs for the three locations are:

Köping = 180000

Eskilstuna = 150000

Västerås = 160000

At a production volume of 2000 brake discs, Eskilstuna has the lowest total costs at 150000€, which leaves a profit of 90000€/year. For volumes below 1000 brake discs, Köping would be most profitable, while Västerås is the best location for volumes over 2500 discs/year.

3.

The six dominating factors are the following:

1. Favorable labor climate
2. Proximity to markets
3. Quality of life
4. Proximity to suppliers and resources
5. Proximity to the parent company's facilities
6. Utilities, taxes, and real estate costs

These are described in the location chapter in the book.