



Problem of the Week

Problem B and Solution

Number Census and Enumeration

Problem

StatsCan is doing a census. Jayne has been hired to enumerate 330 households.

- If Jayne can deliver, on average, one form every 8 minutes, how many hours will she need to deliver all 330 forms?
- On average, she has to travel 0.14 km between households to deliver the forms, and she is paid 92 cents per kilometre. If she is also paid \$14.42 per hour for enumerating, how much money will she earn?
- An average household has 1.7 adults and 1.2 children. Pick an appropriate type of graph to show how many adults and how many children we could expect to see in this region.

Solution

- Jayne will need $8 \times 330 = 2640$ minutes, or $2640 \div 60 = 44$ hours to deliver all the forms.
- There will be 329 spaces of 0.14 km between the 330 households, so Jayne will travel a total distance of $0.14 \times 329 = 46.06$ km. Thus she will be paid $46.06 \times 0.92 \approx \42.38 for travel.

In addition, she will receive $44 \times 14.42 = \$634.48$ for enumerating. Thus she will earn $634.48 + 42.38 = \$676.86$ in total.

- This region will have, on average, $330 \times 1.7 = 561$ adults, and $330 \times 1.2 = 396$ children. Below are two types of graphs which illustrate this.

