



Problem of the Week

Problem B and Solution

Dollars for College

Problem

Cassie starts college in the fall and has decided to live in an apartment. Her monthly living expenses are as follows:

- Rent with utilities: \$800
- Hydro: \$40
- Phone/internet/TV: \$129
- Groceries: \$300



- (a) If she attends school for 18 months, what will be her total living expenses?
- (b) She has learned that her total college fees for the program will be \$6769. If she has \$10 400 saved, how much more money will she need to pay her living expenses plus college fees?
- (c) Instead of taking out a loan to pay for her additional costs found in part (b), Cassie has decided to work part-time at the local bakery. If she earns \$16/hr, for how many hours will she need to work to pay for her additional costs? Round your answer to the nearest hour.
- (d) If Cassie works every week for the 18 months she attends college, for how many hours per week will she have to work to pay for her additional costs? When answering this question, assume that there are four weeks in each month. Round your answer to the nearest hour.

Solution

- (a) Cassie's monthly living expenses total $\$800 + \$40 + \$129 + \$300 = \$1269$. Thus, if she attends school for 18 months, her total living expenses will be $\$1269 \times 18 = \$22\,842$.
- (b) Her total cost for college fees and living expenses will be $\$22\,842 + \$6769 = \$29\,611$. Thus, in addition to the \$10 400 she has saved, she will need $\$29\,611 - \$10\,400 = \$19\,211$.
- (c) Working part-time at the local bakery at \$16/hr, she will need to put in $19\,211 \div 16 \approx 1201$ hours to pay for her additional costs.
- (d) Since she will work a total of $18 \times 4 = 72$ weeks, and needs to put in 1201 hours, she will need to work $1201 \div 72 \approx 17$ hours per week.