

## Busy Summer

Lindsay has worked for a landscaping company for the past two summers. Next year, she plans to start her own lawn care business. She has nine clients lined up and has scheduled half a day per week for each client. She plans to work for 6 months each year, from mid-April to mid-October, and wants to keep her business going for the next four years.

Lindsay will have the following costs for renting and buying the equipment she needs.

- She has three options for getting a lawn tractor and trailer:
  - Buy used with a \$2300 bank loan at 8.3%, compounded monthly, with payments of \$150 per month
  - Lease for \$800 down and \$300 per month for 6 months
  - Rent for \$55 per day
- Tools will cost \$800. She plans to buy them with credit card A at 19.5%, compounded daily.
- Miscellaneous materials and work clothes will cost \$1700. She plans to use credit card B at 16.5%, compounded daily.
- Gas for her truck will cost \$200 per month.

Lindsay plans to borrow money, as necessary, to get her business started. She earned about \$6000 every summer at her previous landscaping job, but she wants to make more than that with her own business.

- ?** How much should she charge each client for a summer contract, based on her costs and expected income?
- A. Compare Lindsay's options for getting a lawn tractor and trailer. Which option would you recommend? Explain.
  - B. Lindsay will make \$100 monthly payments on each credit card from mid-April to mid-October. What will be the balance on each credit card after 6 months? How much interest will she pay altogether?
  - C. At the end of her first work season, Lindsay consolidated her credit card debt in a line of credit at 6.2%, compounded monthly, and then paid it off in 6 monthly payments. How much in interest did she pay to consolidate her debt?
  - D. After four seasons, Lindsay will sell her tractor and trailer (depreciated at 15% per year) and tools (depreciated at 30% per year). How much equity will she have after 4 years?
  - E. What will be her costs, per season, if they are averaged out over 4 seasons?
  - F. How much should she charge each client per season? Explain.



### Task Checklist

- ✓ Did you clearly present your solution?
- ✓ Did you justify your recommendation?
- ✓ Did you use appropriate mathematical terms?