

1. A year ago, Ryan borrowed \$5000 to pay for a new roof on his garage. He borrowed at 7.25%, compounded quarterly, for 2 years. He will repay the loan in a single payment at the end of the term.
 - a) What amount will be due at the maturity date? How much of this amount is interest?
 - b) Suppose that the term and the interest rate were the same, but the interest was compounded annually. What amount would be due at the maturity date? How much of this amount is interest?
 - c) Suppose that the term, interest rate, and compounding were the same, but Ryan decided to make regular monthly payments over the 2 years instead. How much would he end up paying altogether? How much of this would be interest?
2. Allison's grandmother is coming to live with her. Allison needs to renovate her home to make it wheelchair-accessible. Allison has signed a promissory note for a loan from a cousin at 5.5%, compounded monthly. She will repay the loan with a single payment in 4 years.
 - a) If she wants to repay no more than \$15 000, what is the most she can borrow?
 - b) Instead of a single payment at the end of the term, suppose that she made monthly payments. What payment amount would repay the loan in 5 years? How much interest would she pay?
3. Christian wants to upgrade his backpacking equipment to prepare for a summer of trekking. The cost of the new equipment is \$1265, and he has two options to pay for it:
 - A new credit card with an introductory offer of 3% off the first purchase and an interest rate of 14.5%, compounded daily
 - A line of credit with an interest rate of 6.8%, compounded daily
 - a) Christian intends to pay off what he borrows in 1 year, with monthly payments. How much would his payments be for each option?
 - b) Should he use the new credit card or his line of credit? Explain.
4. Erin, an avid sailor, is spending two months at her parents' cottage near Lac La Biche, Alberta. She wants to sail every day.
 - At the marina, she can rent a Laser sailboat for \$60 per day or \$375 per week.
 - The marina is selling a used Laser for \$2200. Erin can arrange a 6-month bank loan at 5.2%, compounded monthly, with monthly loan payments. Lasers depreciate at 25% each year.

Recommend whether Erin should rent daily, rent weekly, or buy used.

WHAT DO You Think Now? Revisit **What Do You Think?** on page 79. How have your answers and explanations changed?