| **Mathematical Concepts — Homework** | **List of Assigned Problems** |
| **MAT 117, Fall 2022 — D. Ivanšić** | |

efou = every fourth

Section	Exercises
8.1	1–57odd, 65, 66, 68, 69, 71, 72
8.2	1–17odd, 38, 40, 44, 45
8.3	1, 5, 7, 11, 13, 15–25odd, 31–37odd, 41, 43
8.4	1–15odd, 17, 19, 23–33odd, 37, 39, 41 43, 49, 51, 55, 63–66 additional problems on page 2 of this sheet
8.5	1, 5, 11, 17, 21, 27, 29, 31, 33, 35, 47
8.6	1–11odd, 25
8.7	1–9odd, 23, 24 additional problems on page 2 of this sheet
11.1	1–57odd, 65, 66, 68, 69, 71, 72
11.4	1–17odd, 38, 40, 44, 45
11.6	1–5odd, 13–16, 17–33odd, 35–38, 39, 41–48, 67–91odd, 102–105, 107
11.7	1–25odd, 31–42, 53–60, 65–76odd, 86–93
11.8	1–19odd, 26–29
12.1	1–7, 9–17, 20, 22-25, 33–37, 48–52
12.2	1, 5, 9, 11, 13, 17, 21, 23, 25, 29, 33, 35, 37, 41, 45, 47, 49, 51, 58–63, 73–75, 77, 78
12.3	3, 5, 11, 15, 19, 23, 27, 29, 31, 37, 47–52
12.4	1–47odd, 59–67odd, 69–72, 87–90
12.5	1–29odd, 39-44
13.1	1–25odd, 31–34, 49–52
14.1	1–33odd, 66, 67, 70
14.2	1–39odd, 45–50, 51–59odd, 69–71, 73

Section 8.4

1. Suppose you deposited $2,500 into an account that compounds quarterly. After three-and-a-half years, you have $3,214.81 in the account. What is the annual interest rate on this account?

2. Today, Seth buys stock of Boeing corporation at $70 per share. He hopes to sell it in 4 years at $150 per share. What annual compound interest rate would this growth correspond to?

Section 8.6, 8.7

3. Ann Hernandez borrowed $10,000 using a loan for 5 years with a 4.75% interest rate, compounded quarterly. She makes quarterly payments on the loan.
a) What is her quarterly payment?
b) Having won a little money on the lottery, Ann wishes to repay the loan after her 12th payment. What amount is due to pay off the loan?

4. Lauren Morse bought a $289,000 condo a while ago. She made a 10% down payment, and got a loan for the remainder, at 6.5% interest over 30 years, compounded monthly . In the meantime, interest rates have dropped, and Lauren decided to refinance. She refinances after her 66th payment, using a loan for 25 years at 5% interest.
a) What is the monthly payment on the first loan?
b) What amount pays off the first loan after the 66th payment?
c) If the bank charges her $3,500 to refinance the loan, which Lauren adds to the principal of the second loan, what is the monthly payment on the second loan?
d) How much would Lauren have paid over 30 years had she kept the first loan?
e) How much will Lauren pay with the combination of the two loans, as described?