

Introduction to Financial Mathematics

Math 30610 Homework 6

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due 3/16 in class

There are 8 exercises on this homework sheet. Unless otherwise specified, all exercises are from the textbook. You are welcome to use any calculator, spreadsheet or programming language, as long as you explain clearly and completely your solution.

1. 2.3.2
2. 2.3.3
3. 2.3.10
4. 2.3.15
5. 2.3.17
6. 3.1.1
7. 3.1.5
8. On the back of this page is a list of dividends paid by Microsoft, and the price at the time of the last dividend. What is the implied effective annual interest rate computed from the Dividend Discount Model on 2/16/2022?
9. (Extra credit) 2.3.38

Microsoft Dividends, Price on 2/16/2022 was \$299.50.

| Date | Dividend |
|------------|----------|
| 02/16/2022 | \$0.62 |
| 11/17/2021 | \$0.62 |
| 08/18/2021 | \$0.56 |
| 05/19/2021 | \$0.56 |
| 02/17/2021 | \$0.56 |
| 11/18/2020 | \$0.56 |
| 08/19/2020 | \$0.51 |
| 05/20/2020 | \$0.51 |
| 02/19/2020 | \$0.51 |
| 11/20/2019 | \$0.51 |
| 08/14/2019 | \$0.46 |
| 05/15/2019 | \$0.46 |
| 02/20/2019 | \$0.46 |
| 11/14/2018 | \$0.46 |
| 08/15/2018 | \$0.42 |
| 05/16/2018 | \$0.42 |
| 02/14/2018 | \$0.42 |
| 11/15/2017 | \$0.42 |
| 08/15/2017 | \$0.39 |
| 05/16/2017 | \$0.39 |
| 02/14/2017 | \$0.39 |
| 11/15/2016 | \$0.39 |
| 08/16/2016 | \$0.36 |
| 05/17/2016 | \$0.36 |
| 02/16/2016 | \$0.36 |
| 11/17/2015 | \$0.36 |
| 08/18/2015 | \$0.31 |
| 05/19/2015 | \$0.31 |
| 02/17/2015 | \$0.31 |
| 11/18/2014 | \$0.31 |
| 08/19/2014 | \$0.28 |
| 05/13/2014 | \$0.28 |
| 02/18/2014 | \$0.28 |
| 11/19/2013 | \$0.28 |
| 08/13/2013 | \$0.23 |
| 05/14/2013 | \$0.23 |
| 02/19/2013 | \$0.23 |
| 11/13/2012 | \$0.23 |
| 08/14/2012 | \$0.20 |
| 05/15/2012 | \$0.20 |
| 02/14/2012 | \$0.20 |
| 11/15/2011 | \$0.20 |
| 08/16/2011 | \$0.16 |
| 05/17/2011 | \$0.16 |
| 02/15/2011 | \$0.16 |
| 11/16/2010 | \$0.16 |
| 08/17/2010 | \$0.13 |
| 05/18/2010 | \$0.13 |
| 02/16/2010 | \$0.13 |