

## Math 17 Exam 2 - Details & Topics Covered

Exam 2 will happen in class on Wednesday, November 14. You will be given the entire class time to complete the exam. The exam is weighted as 22% of your final grade. A few other things:

- **Please bring a calculator to the exam. You will not be permitted to use your phone as a calculator on the exam.**
  - The exam is closed-book and closed-notes. You are not permitted to use technology other than your calculator.
  - You must comply with the UVM Academic Code of Integrity. Cheating will not be tolerated. All work must be your own.
  - You must show your work to receive full credit. Partial credit will be given if sufficient work is shown.
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### Format of Exam

The questions on the exam will be very similar to those on quizzes and homeworks. The exam will be (approximately) three pages. The exam is meant to push you more than the quizzes, so you will need to work quickly and efficiently to solve all the problems in the allotted time. You will need to have studied and practiced the methods in order to be able to work quick enough. The exam will (approximately) evenly weight the three chapters we've covered since the last exam.

### Topics that may be assessed

#### Chapter 10: Financial Mathematics

- Percentages
- Simple interest
- Compound interest (annual and general compounding)
- >**Continuous compounding will NOT be on the exam**
- Annual Percentage Yield to compare different types of interest (refer to lecture notes)

#### Chapter 15: Intro to Statistics

- Graphical Summarization of data
  - Bar graphs, histograms, pie charts, line graphs, box plots
- Numerical Summarization of data
  - Mean, median, quartiles and percentiles, five number summary, range, interquartile range, standard deviation

#### Chapter 17: The Normal Distribution

- Properties (symmetric, characterized by  $\mu$  and  $\sigma$ , etc.)

-68 – 95 – 99.7 rule

- $z$ -values and their interpretation

-Applications (see last quiz or #7, 8 on HW)

## Formulas

$$I = Prt$$

$$F = P(1 + rt)$$

$$F = P(1 + r)^t$$

$$F = P(1 + p)^T$$

$$\text{Mean} = \frac{d_1 + \cdots + d_N}{N}$$

$$(\text{SD})^2 = \frac{(d_1 - \text{Mean})^2 + \cdots + (d_N - \text{Mean})^2}{N}$$

$$IQR = Q_3 - Q_1$$

$$P = \mu + \sigma \quad (\text{upper})$$

$$P' = \mu - \sigma \quad (\text{lower})$$

$$Q_3 = \mu + 0.675\sigma$$

$$Q_1 = \mu - 0.675\sigma$$

$$z = (x - \mu)/\sigma$$

$$x = \sigma z + \mu$$

68–95 – 99.7 rule