Second Quarter Learning Targets

	Learning Targets	Review Problems	1st	2nd	3rd	Notes
2C	**The Normal Distribution Part Two** ⇒ Use z-scores and the Normal Model to solve problems involving percentiles ⇒ Determine if a distribution of data is nearly Normal from graphical and numerical evidence	R2.8, R2.9, R2.10, R2.11, T2.12, T2.13				
3A	**Correlation** ⇒ Use technology to make a scatterplot and calculate r (correlation coefficient) ⇒ Understand r (correlation coefficient) ⇒ Use a scatterplot and the correlation coefficient to describe the association between two quantitative variables (interpret the correlation coefficient) – strength, form and direction ⇒ Describe examples of lurking variables; the difference between association and causation	R3.1a, R3.3c, R3.4a,b, R3.6, T3.1, T3.7, T3.11a, T3.13c				
3B	**Using the LSRL** ⇒ Interpret the slope and y-intercept ⇒ Use the LSRL to predict values ⇒ Understand the dangers of extrapolation ⇒ Use technology to write the LSRL	R3.2, R3.4b,c, R3.5b,c, T3.9, T3.11b,c,d, T3.13b				
3C	**Evaluating the LSRL** ⇒ Understand and interpret residuals and residual plots ⇒ Use technology to make a residual plot ⇒ Understand the meaning of "least squares" ⇒ Understand s and r^2 (coefficient of determination) ⇒ Interpret r^2	R3.3b,d,e, R3.4d,e, R3.5d, T3.3, T3.5, T3.6, T3.13d				

3D	**Writing the LSRL** ⇒ Interpret computer output ⇒ Use a graphing calculator (see 3B) ⇒ Use the summary statistics for x and y and formulas (know that $(\bar{x}, \bar{y})$ is on every LSRL)	R3.3a, R3.5a, T3.13a				
3E	**Correlation and Regression Wisdom** ⇒ Interpret the slope of the standardized data in terms of standard deviations ⇒ Reversing the explanatory and response variables – should it be done? Why or why not? ⇒ Understand the effects of outliers on the LSRL and r	R3.1b,c, T3.2, T3.4, T3.8, T3.10, T3.12				
5A	**Probability and Simulations** ⇒ Understand the nature of probability and the law of large numbers ⇒ Describe a method for using a table of random digits to estimate probabilities	R5.1, R5.2, R5.3, T5.1, T5.2, T5.4, T5.14				
5B	**Basic Probability Rules** ⇒ Use and understand probability terminology (sample space, event) ⇒ Use and understand the Basic Probability Rules	R5.4, T5.3, T5.11a				
5C	**Addition Rule** ⇒ Use two-way tables and Venn diagrams to find probabilities ⇒ Understand how mutually exclusive events affect the Addition Rule	R5.5, T5.5, T5.6, T5.8, T5.9, T5.11b, T5.13b				
5D	**Conditional Probability** ⇒ Use two-way tables, Venn diagrams, and tree diagrams to find conditional probabilities ⇒ Understand how independent events affect the Multiplication Rule ⇒ Use conditional probability to determine whether two events are independent	R5.6, R5.7, R5.8, R5.9, R5.10, T5.7, T5.8, T5.10, T5.11c, T5.12, T5.13a,c				

6A	**Random Variables** ⇒ Describe a discrete random variable with a probability distribution ⇒ Calculate and interpret the mean and standard deviation of a discrete random variable ⇒ Use the Normal model to calculate probabilities for continuous random variables	R6.1, R6.2a,b, R6.3, R6.4, T6.1, T6.2, T6.3, T6.11				
6B	**Transforming and Combining Random Variables** ⇒ Understand the effects of adding or multiplying each value of a random variable by a constant ⇒ Understand the effects of combining (add or subtract) two random variables on the mean, variance and standard deviation ⇒ Understand that the combination (add or subtract) of two Normal models is a Normal model	R6.2c,d, T6.4, T6.5, T6.13				

- Each learning target will be assessed the week it is taught. It will be assessed again at least one more time a week or two later.
  - If the last grade for a learning target is the highest grade for that learning target, then that will be the grade for the learning target (replacing any lower grades in the grade book).
  - If the last grade is not the highest grade for that learning target, then the most recent grade will be averaged with the existing grade.
  - Parents may be notified when a score of 0 or 1 is earned on any learning target.

Score Conversions:

Target Score	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Percent	40	45	50	55	60	65	70	75	80	85	90	95	100