

GRADE 6-8 VIRGINIA MATHEMATICS STANDARDS CORRELATED TO THE STOCK MARKET GAME™

NUMBER AND NUMBER SENSE		SMG CORE LESSON*
6.1	The student will identify representations of a given percent and describe orally and in writing the equivalence relationships among fractions, decimals, and percents.	-Stock -Risk -Dividends -Money Grow -Funds -Exchanges -Tickers -Diversify -Sell/Hold -Price Change -Strategy
6.2	The student will describe and compare two sets of data, using ratios and will use appropriate notations, such as a/b , a to b and $a:b$.	-Tickers -Price Change
6.3	The student will a) find common multiples and factors, including least common multiple and greatest common factor; b) identify and describe prime and composite numbers; and c) identify and describe the characteristics of even and odd integers.	-Tickers
6.4	The student will compare and order whole numbers, fractions and decimals, using concrete materials, drawings or pictures, and mathematical symbols.	-Comparison and conversion of stock prices which are quoted in fractions, converted to decimals
6.5	The student will identify, represent, order and compare integers.	-Price Change
7.1	The student will compare, order, and determine equivalent relationships between fractions, decimals, and percents, including use of scientific notation for numbers greater than 10.	-Stock -Dividends -Tickers
7.3	The student will identify and apply the following properties of operations with real numbers: a) the commutative and associative properties for addition and multiplication; b) the distributive property; c) the additive and multiplicative identity properties; d) the additive and multiplicative inverse properties; and e) the multiplicative property of zero.	-Stock transactions could demonstrate the commutative and associative properties -Calculations of broker fees for several trades -Stock prices could be used to demonstrate the properties
8.1	The student will (a) simplify numerical expressions involving positive exponents, using rational numbers, order of operations, and properties of operations with real numbers; (b) recognize, represent, compare, and order numbers expressed in scientific notation; and (c) compare and order decimals, fractions, percents, and numbers written in scientific notation.	-Stock -Risk -Dividends -Money Grow -Funds -Exchanges -Tickers -Diversify -Sell/Hold -Price Change -Strategy
8.2	The student will describe orally and in writing the relationship between the subsets of the real number system.	-Stock -Risk -Dividends -Money Grow -Funds -Exchanges -Tickers -Diversify -Sell/Hold -Price Change -Strategy

COMPUTATION AND ESTIMATION		SMG CORE LESSON*
6.6	The student will a) solve problems that involve addition, subtraction, multiplication, and/or division with fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less, and express their answers in simplest form; and b) find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit.	-Tickers
6.7	The student will use estimation strategies to solve multistep practical problems involving whole numbers, decimals, and fractions (rational numbers).	-Stock
6.8	The student will solve multistep consumer-application problems involving fractions and decimals and present data and conclusions in paragraphs, tables, or graphs. Planning a budget will be included.	-Stock -Dividends
7.4	The student will a) solve practical problems using rational numbers (whole numbers, fractions, decimals) and percents; and b) solve consumer-application problems involving tips, discounts, sales tax, and simple interest.	-Money Grow
7.5	The student will formulate rules for and solve practical problems involving basic operations (addition, subtraction, multiplication, and division) with integers.	-Tickers -Diversify
8.3	The student will solve practical problems involving rational numbers, percents, and ratios and proportions. Problems will be of carrying complexities and will involve real-life data, such as finding a discount and discount prices and balancing a checkbook.	ALL

*SMG Core Lessons are available to registered SMG teachers. Lessons are on the SMG web site www.stockmarketgame.org in the Teacher Support Center.

PROBABILITY AND STATISTICS		SMG CORE LESSONS*
6.18	The student, given a problem situation, will collect, analyze, display, and interpret data in a variety of graphical methods, including a) line, bar, and circle graphs; b) stem-and-leaf plots; and c) box-and-whisker plots. Circle graphs will be limited to halves, fourths, and eighths.	-Stock -Money Grow -Tickers -Dividends -Risks
6.19	The student will describe the mean, median, and mode as measures of central tendency, describe the range, and determine their meaning for a set of data.	-Risk -Dividends -Money Grow -Diversify -Sell/Hold -Price Change -Strategy
6.20	The student will a) make a sample space for selected experiments and represent it in the form of a list, chart, picture, or tree diagram; and b) determine and interpret the probability of an event occurring from a given sample space and represent the probability as a ratio, decimal or percent, as appropriate for the given situation.	-Money Grow -Price Change
7.14	The student will investigate and describe the difference between the probability of an event found through simulation versus the theoretical probability of that same event.	-Price Change
7.16	The student will create and solve problems involving the measures of central tendency (mean, median, mode) and the range of a set of data.	-Risk -Dividends -Money Grow -Funds -Tickers -Diversify -Sell/Hold -Price Change -Strategy
7.17	The student, given a problem situation, will collect, analyze, display, and interpret data, using a variety of graphical methods, including a) frequency distributions; b) line plots; c) histograms; d) stem-and-leaf plots; e) box-and-whisker plots; and f) scattergrams.	-Exchanges -Risk -Dividends -Money Grow -Funds -Tickers -Diversify -Sell/Hold -Price Change -Strategy
7.18	The student will make inferences, conjectures, and predictions based on analysis of a set of data.	-Stock -Risk -Dividends -Money Grow -Funds -Exchanges -Tickers -Diversify -Sell/Hold -Price Change -Strategy
8.11	The student will analyze problem situations, including games of chance, board games, or grading scales, and make predictions, using knowledge of probability.	ALL
8.12	The student will make comparisons, predictions, and inferences, using information displayed in frequency distributions; box-and-whisker plots; scattergrams; line, bar, circle, and picture graphs; and histograms.	-Stock -Risk -Dividends -Money Grow -Funds -Exchanges -Tickers -Diversify -Sell/Hold -Price Change -Strategy
8.13	The student will use a matrix to organize and describe data.	-Stock -Risk -Dividends -Money Grow -Funds -Exchanges -Tickers -Diversify -Sell/Hold -Price Change -Strategy

PATTERNS, FUNCTIONS, AND ALGEBRA		SMG CORE LESSONS*
6.23	The student will a) model and solve algebraic equations, using concrete materials; b) solve one-step linear equations in one variable, involving whole number coefficients and positive rational solutions; and c) use the following algebraic terms appropriately: <i>variable, coefficient, term, and equation.</i>	-Determining number of shares to buy at various prices
7.20	The student will write verbal expression as algebraic expressions and sentences as equations.	-Mathematical data in the game
8.14	The student will (a) describe and represent relations and functions, using tables, graphs, and rules; and (b) relate and compare tables, graphs, and rules as different forms of representation fro relationships.	-Stock -Risk -Dividends -Money Grow -Funds -Tickers -Diversify -Sell/Hold -Price Change -Strategy
8.17	The student will create and solve problems, using proportions, formulas, and functions.	-Stock -Dividends -Money Grow -Funds -Tickers -Diversify -Sell/Hold -Price Change -Strategy

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