

Pre-AP Mathematics Grade 6

4th Nine Weeks Scope and Sequence

Content Standards	Dates Taught	% of Students scoring over 70%	Dates Re-taught (Optional)	Formative and Summative Assessments/ (Any Additional Comments Optional)
Statistics and Probability				
27. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number. [6-SP3]				
29. Summarize numerical data sets in relation to their context, such as by: [6-SP5] b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. [6-SP5b] c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation) as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. [6-SP5c]				
28. Display numerical data in plots on a number line, including dot plots, histograms, and box plots. [6-SP4]				
29. Summarize numerical data sets in relation to their context, such as by: [6-SP5] a. Reporting the number of observations. [6-SP5a] b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. [6-SP5b]				

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29c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation) as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. [6-SP5c]				
26. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. [6-SP2]				
29. Summarize numerical data sets in relation to their context, such as by: [6-SP5] d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered. [6-SP5d]				
Expressions and Equations				
12. Write and evaluate numerical expressions involving whole-number exponents. [6-EE1]				
17. Use variables to represent numbers, and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number or, depending on the purpose at hand, any number in a specified set. [6-EE6]				
14. Apply the properties of operations to generate equivalent expressions. [6-EE3] Example: Apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$.				
15. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). [6-EE4]				

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15. Example: The expressions $y + y + y$ and $3y$ are equivalent because they name the same number regardless of which number y represents.				
13. Write, read, and evaluate expressions in which letters stand for numbers. [6-EE2]				
16. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true. [6-EE5]				
18. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q , and x are all nonnegative rational numbers. [6-EE7]				
Ratios and Proportional Relationships				
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. [6-RP3]				
Expressions and Equations				
<p>13. Write, read, and evaluate expressions in which letters stand for numbers. [6-EE2]</p> <p>c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). [6-EE2c]</p> <p>Example: Use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = \frac{1}{2}$.</p>				

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<p>20. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. [6-EE9]</p> <p>Example: In a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.</p>				
<p>19. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams. [6-EE8]</p>				
Statistics and Probability (Course of Study Grade 7)				
<p>24. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. [7-SP8]</p> <p>a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. [7-SP8a]</p>				