Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Eighth Grade Math OAS Objectives**

**Standard Based Report Card**

Teacher: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ School: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_

P = Proficient B = Basic BB = Below Basic

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| **OAS****Obj.#** | **Oklahoma Academic Standards (OAS) Objective Description** | **Nine Weeks** |
| **1** | **2** | **3** | **4** |
| PA.N.1.1 | Develop and apply the properties of integer exponents, including *a0* = *1* (with *a* ≠ 0), to generate equivalent numerical and algebraic expressions. |  |  |  |  |
| PA.N.1.2 | Express and compare approximations of very large and very small numbers using scientific notation. |  |  |  |  |
| PA.N.1.3 | Multiply and divide numbers expressed in scientific notation, express the answer in scientific notation. |  |  |  |  |
| PA.N.1.4 | Classify real numbers as rational or irrational. Explain why the rational number system is closed under addition and multiplication and why the irrational system is not. Explain why the sum of a rational number and an irrational number is irrational; and the product of a non-zero rational number and an irrational number is irrational. |  |  |  |  |
| PA.N.1.5 | Compare real numbers; locate real numbers on a number line. Identify the square root of a perfect square to 400 or, if it is not a perfect square root, locate it as an irrational number between two consecutive positive integers. |  |  |  |  |
| PA.A.1.1 | Recognize that a function is a relationship between an independent variable and a dependent variable in which the value of the independent variable determines the value of the dependent variable. |  |  |  |  |
| PA.A.1.2 | Use linear functions to represent and explain real-world and mathematical situations. |  |  |  |  |
| PA.A.1.3 | Identify a function as linear if it can be expressed in the form *y = mx + b* or if its graph is a straight line |  |  |  |  |
| PA.A.2.1 | Represent linear functions with tables, verbal descriptions, symbols, and graphs; translate from one representation to another. |  |  |  |  |
| PA.A.2.2 | Identify, describe, and analyze linear relationships between two variables. |  |  |  |  |
| PA.A.2.3 | Identify graphical properties of linear functions including slope and intercepts. Know that the slope equals the rate of change, and that the y-intercept is zero when the function represents a proportional relationship. |  |  |  |  |
| PA.A.2.4 | Predict the effect on the graph of a linear function when the slope or y-intercept changes. Use appropriate tools to examine these effects. |  |  |  |  |
| PA.A.2.5 | Solve problems involving linear functions and interpret results in the original context. |  |  |  |  |
| PA.A.3.1 | Use substitution to simplify and evaluate algebraic expressions. |  |  |  |  |
| PA.A.3.2 | Justify steps in generating equivalent expressions by identifying the properties used, including the properties of operations (associative, commutative, and distributive laws) and the order of operations, including grouping symbols. |  |  |  |  |
| PA.A.4.1 | Illustrate, write, and solve mathematical and real-world problems using linear equations with one variable with one solution, infinitely many solutions, or no solutions. Interpret solutions in the original context. |  |  |  |  |
| PA.A.4.2 | Represent, write, solve, and graph problems leading to linear inequalities with one variable in the form *px + q > r* and *px + q < r*, where *p, q,* and *r* are rational numbers. |  |  |  |  |
| PA.A.4.3 | Represent real-world situations using equations and inequalities involving one variable. |  |  |  |  |
| PA.GM.1.1 | Informally justify the Pythagorean Theorem using measurements, diagrams, or dynamic software and use the Pythagorean Theorem to solve problems in two and three dimensions involving right triangles. |  |  |  |  |
| PA.GM.1.2 | Use the Pythagorean Theorem to find the distance between any two points in a coordinate plane. |  |  |  |  |
| PA.GM.2.1 | Calculate the surface area of a rectangular prism using decomposition or nets. Use appropriate measurements such as cm2. |  |  |  |  |
| PA.GM.2.2 | Calculate the surface area of a cylinder, in terms of $π$ and using approximations for $π$, using decomposition or nets. Use appropriate measurements such as cm2. |  |  |  |  |
| PA.GM.2.3 | Develop and use the formulas *V = lwℎ* and *V = Bℎ* to determine the volume of rectangular prisms. Justify why base area (*B*) and height (*h*) are multiplied to find the volume of a rectangular prism. Use appropriate measurements such as cm3. |  |  |  |  |
| PA.GM.2.4 | Develop and use the formulas *V =* $π$*r2ℎ* and *V =Bℎ* to determine the volume of right cylinders, in terms of $π$ and using approximations for $π$. Justify why base area (*B*) and height (*h*) are multiplied to find the volume of a right cylinder. Use appropriate measurements such as cm3. |  |  |  |  |
| PA.D.1.1 | Describe the impact that inserting or deleting a data point has on the mean and the median of a data set. Know how to create data displays using a spreadsheet and use a calculator to examine this impact. |  |  |  |  |
| PA.D.1.2 | Explain how outliers affect measures of central tendency. |  |  |  |  |
| PA.D.1.3 | Collect, display and interpret data using scatterplots. Use the shape of the scatterplot to informally estimate a line of best fit, make statements about average rate of change, and make predictions about values not in the original data set. Use appropriate titles, labels and units. |  |  |  |  |
| PA.D.2.1 | Calculate experimental probabilities and represent them as percents, fractions and decimals between 0 and 1 inclusive. Use experimental probabilities to make predictions when actual probabilities are unknown. |  |  |  |  |
| PA.D.2.2 | Determine how samples are chosen (random, limited, biased) to draw and support conclusions about generalizing a sample to a population. |  |  |  |  |
| PA.D.2.3 | Compare and contrast dependent and independent events. |  |  |  |  |

● Unmarked boxes in the table are objectives that had not been assessed as of report date.