

8th Grade Mathematics

2016-17



The following learning targets represent the major concepts studied and assessed in this course.

Semester 1

- Unit 1**
1. Apply properties of integer exponents to generate equivalent expressions.
 2. Evaluate and solve equations using square roots of perfect squares less than or equal to 625 and cube roots of perfect cubes less than or equal to 1000.
- Unit 4**
3. Interpret and compare linear relationships.
 4. Graph a linear relationship.
 5. Find slope and use it to write a linear equation given a variety of information.
- Unit 3**
6. Solve multi-step linear equations with variables on one side.
 7. Solve multi-step linear equations with variables on both sides.
 8. Identify the number of solutions to a linear equation.
- Unit 5**
9. Graph systems of linear equations and interpret the solution.
 10. Classify (one solution, no solution, many solutions) and explain (what the solution means) the solution(s) to a system of equations.
 11. Solve a system of equations algebraically.
- Unit 2**
- ***I can write and compare numbers in scientific notation.

Semester 2

- Unit 7**
12. Use the Pythagorean Theorem and its converse to solve problems.
 13. Find distance on the coordinate plane.
 14. Find the unknown side length of a solid and use it to solve problems.
 15. Find volume of pyramids, cones, and spheres, and use it to solve problems.
- Rational & Irrational Numbers Mini-Unit**
16. Identify whether a number is rational or irrational, and approximate on the number line.
- Angles Mini-Unit**
17. Use angle relationships in triangles and parallel lines cut by a transversal to solve problems.
- Unit 9**
18. Describe the effect of transformations of two-dimensional figures using coordinates.
 19. Describe the effect of transformations on the side lengths and angle measures of two-dimensional figures in terms of congruence and similarity.
 20. Describe a possible sequence of transformations between two figures.
- Unit 6**
21. Determine what is and is not a function.
 22. Compare and interpret linear functions represented in a variety of ways, including the initial value and rate of change.
 23. Describe the functional relationship between two quantities (including linear, non-linear, increasing, and decreasing).
- Unit 10**
24. Construct and interpret a scatter plot, including its linear model.
 25. Construct and interpret a two-way table summarizing data on two categorical variables.