## Autodesk

ROBOTICS DESIGN SYSTEM
Common Core State Standards for Mathematics

| Domain \# | Domain | Cluster | Standard |
| :---: | :--- | :--- | :--- |
| 6.RP.A | Grade 6 | Ratios and Proportional Relationships | Understand ratio concepts and use ratio reasoning to solve |
| 6.NS.A | Grade 6 | The Number System | Apply and extend previous understandings of multiplication and division to <br> divide fractions by fractions. |
| 6.NS.B | Grade 6 | The Number System | Compute fluently with multi-digit numbers and find common factors and <br> multiples. |
| 6.NS.C | Grade 6 | Apply and extend previous understandings of numbers to the system of <br> rational numbers. |  |
| 6.EE.A | Grade 6 | Expressions and Equations | Apply and extend previous understandings of arithmetic to algebraic <br> expressions. |
| 6.EE.B | Grade 6 | Expressions and Equations | Reason about and solve one-variable equations and inequalities. <br> Represent and analyze quantitative relationships between dependent and <br> independent variables. |
| 6.EE.C | Grade 6 | Expressions and Equations | Solve real-world and mathematical problems involving area, surface area, and <br> volume. |
| 6.G.A | Grade 6 | Geometry | Develop understanding of statistical variability. |
| 6.SP.A | Grade 6 | Statistics and Probability | Summarize and describe distributions. <br> 6.S.B |
| 7.RP.A | Grade 7 | Ratios and Proportional Relationships proportional relationships and use them to solve real-world and |  |
| mathematical problems. |  |  |  |


| 8.G.B | Grade 8 | Geometry | Understand and apply the Pythagorean Theorem. |
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| 8.G.C | Grade 8 | Geometry | Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. |
| 8.SP.A | Grade 8 | Statistics and Probability | Investigate patterns of association in bivariate data. |
| N-RN.A | Number and Quantity | The Real Number System | Extend the properties of exponents to rational exponents. |
| N-RN.B | Number and Quantity | The Real Number System | Use properties of rational and irrational numbers. |
| N-Q.A | Number and Quantity | Quantities* | Reason quantitatively and use units to solve problems. |
| N-CN.A | Number and Quantity | The Complex Number System | Perform arithmetic operations with complex numbers. |
| A-CED.A | Algebra | Creating Equations* | Create equations that describe numbers or relationships |
| A-REI.A | Algebra | Reasoning with Equations and Inequalities | Understand solving equations as a process of reasoning and explain the reasoning |
| G-CO.A | Geometry | Congruence | Experiment with transformations in the plane |
| G-CO.B | Geometry | Congruence | Understand congruence in terms of rigid motions |
| G-CO.C | Geometry | Congruence | Prove geometric theorems |
| G-CO.D | Geometry | Congruence | Make geometric constructions |
| G-SRT.A | Geometry | Similarity, Right Triangles, and Trigonometry | Understand similarity in terms of similarity transformations |
| G-SRT.B | Geometry | Similarity, Right Triangles, and Trigonometry | Prove theorems involving similarity |
| G-SRT.C | Geometry | Similarity, Right Triangles, and Trigonometry | Define trigonometric ratios and solve problems involving right triangles |
| G-SRT.D | Geometry | Similarity, Right Triangles, and Trigonometry | Apply trigonometry to general triangles |
| G-C.A | Geometry | Circles | Understand and apply theorems about circles |
| G-GMD.A | Geometry | Geometric Measurement and Dimension | Explain volume formulas and use them to solve problems |
| G-GMD.B | Geometry | Geometric Measurement and Dimension | Visualize relationships between two-dimensional and threedimensional objects |
| G-MG.A | Geometry | Modeling with Geometry | Apply geometric concepts in modeling situations |
| S-ID.A | Statistics and Probability | Interpreting Categorical and Quantitative Data | Summarize, represent, and interpret data on a single count or measurement variable |
| S-ID.B | Statistics and Probability | Interpreting Categorical and Quantitative Data | Summarize, represent, and interpret data on two categorical and quantitative variables |
| S-ID.C | Statistics and Probability | Interpreting Categorical and Quantitative Data | Interpret linear models |
| S-IC.A | Statistics and Probability | Making Inferences and Justifying Conclusions | Understand and evaluate random processes underlying statistical experiments |
| S-IC.B | Statistics and Probability | Making Inferences and Justifying Conclusions | Make inferences and justify conclusions from sample surveys, experiments, and observational studies |
| S-CP.A | Statistics and Probability | Conditional Probability and the Rules of Probability | Understand independence and conditional probability and use them to interpret data |
| S-CP.B | Statistics and Probability | Conditional Probability and the Rules of Probability | Use the rules of probability to compute probabilities of compound events in a uniform probability model |
| S-MD.A | Statistics and Probability | Using Probability to Make Decisions | Calculate expected values and use them to solve problems |
| S-MD.B | Statistics and Probability | Using Probability to Make Decisions | Use probability to evaluate outcomes of decisions |

