

## Praxis<sup>®</sup> Core Mathematics (5732) Study Plan

Test Content Categories	Description of content	How well do I know the content? (scale 1–5)	What resources do I have/need for this content?	Where can I find the resources I need?	Dates I will study this content	Date completed
<b>I. Number and Quantity (30%)</b>						
<b>A. Ratios and Proportional Relationships</b>						
1. Understand ratio concepts and use ratio reasoning to solve problems						
2. Analyze proportional relationships and use them to solve real-world and mathematical problems						
<b>B. The Real Number System</b>						
1. Apply understanding of multiplication and division to divide fractions by fractions						
2. Compute fluently with multi-digit numbers and find common factors and multiples						
3. Apply understanding of operations with fractions to add, subtract, multiply, and divide rational numbers						
4. Know that there are numbers that are not rational, and approximate them by rational numbers						
5. Work with radicals and integer exponents						
<b>C. Quantities</b>						
1. Reason quantitatively and use units to solve problems						

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<b>II. Algebra and Functions (30%)</b>						
<b>A. Seeing Structure in Expressions</b>						
1. Apply understanding of arithmetic to algebraic expressions						
2. Solve real-life and mathematical problems using numerical and algebraic expressions						
3. Use properties of operations to generate equivalent expressions						
<b>B. Reasoning with Equations and Inequalities</b>						
1. Understand the connections between proportional relationships, lines, and linear equations						
2. Understand solving equations as a process of reasoning and explain the reasoning						
3. Reason about and solve one-variable equations and inequalities						
4. Solve equations and inequalities in one variable						
5. Analyze and solve linear equations and pairs of simultaneous linear equations						
6. Represent and solve equations and inequalities graphically						
<b>C. Functions</b>						

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1. Interpreting functions						
2. Building functions						
<b>III. Geometry (20%)</b>						
<b>A. Congruence and Similarity</b>						
1. Draw, construct, and describe geometrical figures and describe the relationships between them						
2. Experiment with transformations in the plane						
<b>B. Right Triangles</b>						
1. Understand and apply the Pythagorean theorem						
<b>C. Circles</b>						
1. Understand and apply theorems about circles						
<b>D. Geometric Measurement and Dimension</b>						
1. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume						
2. Explain volume formulas and use them to solve problems						

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<b>E. Modeling with Geometry</b>						
1. Apply geometric concepts in modeling situations						
<b>IV. Statistics and Probability (20%)</b>						
<b>A. Basic Statistics and Probability</b>						
1. Develop understanding of statistical variability						
2. Summarize and describe distributions						
3. Use random sampling to draw inferences about a population						
4. Investigate chance processes and develop, use, and evaluate probability models						
5. Investigate patterns of association in bivariate data						
<b>B. Interpreting Categorical and Quantitative Data</b>						
1. Summarize, represent, and interpret data on a single count or measurement variable						
2. Interpret linear models						
<b>C. Making Inferences and Justifying Conclusions</b>						
1. Understand and evaluate random processes underlying statistical experiments						

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D. Using Probability to Make Decisions						
1. Use probability to evaluate outcomes of decisions						