Texas TSIA2

TSIA2 Mathematics (2021)

Quantitative Reasoning I

A (Diagnostic only) Perform basic math operations with whole numbers and integers, decimals, and fractions I.A

1 The student will use mathematical symbols to represent words that represent those symbols, and add, subtract, multiply, and divide whole numbers, decimals, and fractions. I.A.1

B (Diagnostic only) Round numbers to a given decimal place I.B

1 The student will round to a specified place value, including 10, 100, and 1,000. I.B.1

C (Diagnostic only) Compare numbers in a variety of forms, including decimals, fractions, and percents I.C

1 The student will compare and order whole numbers, decimals, and fractions (including on a number line). I.C.1

D Compare magnitudes of rational and irrational numbers I.D

1 The student will apply math operations to rational and irrational numbers. I.D.1

E Solve problems with ratios, proportions, and percents I.E

1 The student will apply ratios, proportions, and percents to solve problems. I.E.1

F Solve proportional relationship problems in context (e.g., linear relationships in financial literacy and numeracy) I.F

1 The student will formulate a solution to a real-world situation based on the solution to a mathematical problem. I.F.1

G Identify, manipulate, and interpret linear equations, inequalities, and expressions I.G

1 The student will recognize and use algebraic properties, concepts, procedures, and algorithms to combine, transform, evaluate, and interpret expressions and equations. I.G.1

Algebraic Reasoning II

A Solve linear equations, inequalities, and systems of linear equations II.A

1 The student will recognize and use algebraic properties, concepts, procedures, and algorithms to solve equations, inequalities, and systems of linear equations, as well as make connections among graphical, tabular, and algebraic representations. II.A.1

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B Evaluate linear functions II.B

1 The student will evaluate a linear function for a particular value. II.B.1

C Solve quadratic and exponential relationship problems in context II.C

1 The student will formulate a solution to a real-world situation based on the solution to a mathematical problem. II.C.1

D Identify and manipulate quadratic, polynomial, exponential, rational, and radical equations and expressions II.D

1 The student will recognize and use algebraic properties, concepts, procedures, and algorithms to combine, transform, and evaluate expressions and equations. II.D.1

E Solve equations and evaluate functions (e.g., quadratic, polynomial, exponential, rational, and radical) II.E

1 The student will recognize and use algebraic properties, concepts, procedures, and algorithms to solve equations and evaluate functions, as well as make connections among graphical, tabular, and algebraic representations. II.E.1

Geometric and Spatial Reasoning III

A (Diagnostic only) Identify common units of measurement III.A

1 The student will identify length, area, volume, time, and temperature as standard measurements. III.A.1

B (Diagnostic only) Identify and define types of angles III.B

1 The student will identify and define angles including supplementary, complementary, and vertical angles. III.B.1

C Convert units within systems of measurement III.C

1 The student will use proportional reasoning to convert units of measurement. III.C.1

D Find perimeter, area, surface area, and volume using a variety of methods, including estimation III.D

1 The student will recognize, identify, and validate properties of two- and three-dimensional figures, as well as calculate perimeter, area, surface area, and volume of figures. III.D.1

E Use transformations to investigate congruence, similarity, and symmetry III.E

1 The student will identify and apply transformations to figures. III.E.1

F Apply right triangle relationships and basic trigonometry III.F

1 The student will apply right angle relationships and use basic trigonometric ratios to solve problems. III.F.1

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G Make connections between geometry and algebraic equations III.G

1 The student will make connections between geometry and algebra. III.G.1

Probabilistic and Statistical Reasoning IV

A (Diagnostic only) Sort and count data IV.A

1 The student will sort and count data. IV.A.1

B (Diagnostic only) Construct simple graphs and tables IV.B

1 The student will construct simple graphs and tables to represent data. IV.B.1

C Compute and interpret probability IV.C

1 The student will compute and interpret the probability of an event and its complement. IV.C.1

D Compute and describe measures of center and spread of data IV.D

1 The student will compute and describe summary statistics of data. IV.D.1

E Classify data and construct appropriate representations of data IV.E

1 The student will identify appropriate representations of data based on its type. IV.E.1

F Analyze, interpret, and draw conclusions from data IV.F

1 The student will determine types of data, analyze given information, and determine a solution. IV.F.1