

PROGRAM OVERVIEW

Table of Contents for Instructional Units

Unit 1: Descriptive Statistics

Unit 1 Pre-Assessment

Topic A: Representing and Interpreting Data

Lesson 1.1: Representing Data Sets (TEKS.AQR.4P)

Lesson 1.2: Comparing Data Sets (TEKS.AQR.4P)

Lesson 1.3: Interpreting Data Sets (TEKS.AQR.4O, TEKS.AQR.4P)

Topic B: Using the Normal Curve

Lesson 1.4: Normal Distributions and the 68–95–99.7 Rule (TEKS.AQR.4P)

Lesson 1.5: Standard Normal Calculations (TEKS.AQR.4P)

Lesson 1.6: Assessing Normality (TEKS.AQR.4P)

Topic C: Summarizing, Representing, and Finding Patterns in Data

Lesson 1.7: Summarizing Data Using Two-Way Frequency Tables (TEKS.AQR.3A)

Lesson 1.8: Solving Problems Given Functions Fitted to Data (TEKS.AQR.3A)

Lesson 1.9: Analyzing Residuals (TEKS.AQR.3A)

Lesson 1.10: Fitting Linear Functions to Data (TEKS.AQR.3A)

Topic D: Interpreting Statistical Models

Lesson 1.11: Interpreting Key Features (TEKS.AQR.3A)

Lesson 1.12: Calculating and Interpreting the Correlation Coefficient (TEKS.AQR.3A)

Lesson 1.13: Distinguishing Between Correlation and Causation (TEKS.AQR.3B)

Answer Keys

Unit 1 Assessment

Unit 2: Probability

Unit 2 Pre-Assessment

Topic A: Events

Lesson 2.1: Describing Events (TEKS.AQR.4B)

Lesson 2.2: The Addition Rule (TEKS.AQR.4B)

Lesson 2.3: Understanding Independent Events (TEKS.AQR.4C)

Topic B: Conditional Probability

Lesson 2.4: Introducing Conditional Probability (TEKS.AQR.4C, TEKS.AQR.4D)

Lesson 2.5: Using Two-Way Frequency Tables (TEKS.AQR.4A)

Lesson 2.6: The Multiplication Rule (TEKS.AQR.4C, TEKS.AQR.4D)

Topic C: Combinatorics

Lesson 2.7: Combinations and Permutations (TEKS.AQR.2E)

Lesson 2.8: Probability with Combinatorics (TEKS.AQR.2E)

Topic D: Decision Making with Probability

Lesson 2.9: Determining Fairness (TEKS.AQR.4E)

Lesson 2.10: Making Decisions Using Probability (TEKS.AQR.4E)

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Topic E: Probability Distributions

Lesson 2.11: Creating Graphs of Probability Distributions (TEKS.AQR.4F)

Lesson 2.12: Expected Value (TEKS.AQR.4F)

Lesson 2.13: Developing Probability Distributions (TEKS.AQR.4F)

Lesson 2.14: Using Probability Distributions to Evaluate Outcomes (TEKS.AQR.4F)

Performance Task

Playing Roulette (TEKS.AQR.4F)

Answer Keys

Unit 2 Assessment

Unit 3: Inferences and Conclusions from Data

Unit 3 Pre-Assessment

Topic A: Populations Versus Random Samples and Random Sampling

Lesson 3.1: Differences Between Populations and Samples (TEKS.AQR.4M, TEKS.AQR.4Q)

Lesson 3.2: Simple Random Sampling (TEKS.AQR.4M, TEKS.AQR.4Q)

Lesson 3.3: Other Methods of Random Sampling
(TEKS.AQR.4M, TEKS.AQR.4O, TEKS.AQR.4Q)

Topic B: Surveys, Experiments, and Observational Studies

Lesson 3.4: Identifying Surveys, Experiments, and Observational Studies (TEKS.AQR.4L)

Lesson 3.5: Designing Surveys, Experiments, and Observational Studies (TEKS.AQR.4L)

Topic C: Estimating Sample Proportions and Sample Means

Lesson 3.6: Estimating Sample Proportions (TEKS.AQR.4I)

Lesson 3.7: The Binomial Distribution (TEKS.AQR.4I)

Lesson 3.8: Estimating Sample Means (TEKS.AQR.4I)

Lesson 3.9: Estimating with Confidence (TEKS.AQR.4I, TEKS.AQR.4Q)

Topic D: Comparing Treatments and Reading Reports

Lesson 3.10: Evaluating Treatments (TEKS.AQR.4H, TEKS.AQR.4J, TEKS.AQR.4K)

Lesson 3.11: Designing and Simulating Treatments
(TEKS.AQR.4H, TEKS.AQR.4J, TEKS.AQR.4K)

Lesson 3.12: Reading Reports (TEKS.AQR.2B, TEKS.AQR.4H, TEKS.AQR.4J, TEKS.AQR.4K)

Topic E: Making and Analyzing Decisions

Lesson 3.13: Making Decisions (TEKS.AQR.2G, TEKS.AQR.4R, TEKS.AQR.4S,
TEKS.AQR.4T)

Lesson 3.14: Analyzing Decisions (TEKS.AQR.2G, TEKS.AQR.4R, TEKS.AQR.4S,
TEKS.AQR.4T)

Answer Keys

Unit 3 Assessment

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Unit 4: Modeling with Functions

Unit 4 Pre-Assessment

Topic A: Units of Measure

Lesson 4.1: Converting Units (TEKS.AQR.2A)

Lesson 4.2: Modeling with Units and Precision in Modeling (TEKS.AQR.2A)

Topic B: Modeling Exponential Functions

Lesson 4.3: Rewriting Exponential Expressions and Equations (TEKS.AQR.3C)

Lesson 4.4: Building Functions Including Parameters (TEKS.AQR.3C)

Topic C: Modeling Logarithmic Functions

Lesson 4.5: Logarithmic Functions as Inverses (TEKS.AQR.3C)

Lesson 4.6: Common Logarithms (TEKS.AQR.3C)

Lesson 4.7: Natural Logarithms (TEKS.AQR.3C)

Lesson 4.8: Graphing Logarithmic Functions (TEKS.AQR.3C)

Lesson 4.9: Interpreting Logarithmic Models (TEKS.AQR.3C)

Topic D: Graphs of Trigonometric Functions

Lesson 4.10: Periodic Phenomena and Amplitude, Frequency, and Midline (TEKS.AQR.3D)

Lesson 4.11: Using Trigonometric Functions to Model Periodic Phenomena
(TEKS.AQR.3D)

Topic E: Modeling Trigonometric Functions

Lesson 4.12: Graphing the Sine Function (TEKS.AQR.3D)

Lesson 4.13: Graphing the Cosine Function (TEKS.AQR.3D)

Topic F: Choosing a Model

Lesson 4.14: Linear, Exponential, and Quadratic Functions (TEKS.AQR.3C)

Lesson 4.15: Piecewise, Step, and Absolute Value Functions (TEKS.AQR.3E)

Topic G: Algorithms

Lesson 4.16: Introduction to Algorithms (TEKS.AQR.2H)

Lesson 4.17: Creating and Applying Algorithms (TEKS.AQR.2H)

Answer Keys

Unit 4 Assessment

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Unit 5: Matrices

Unit 5 Pre-Assessment

Topic A: Manipulating Matrices

Lesson 5.1: Performing Operations on Matrices (TEKS.AQR.2F)

Lesson 5.2: Using Operations on Matrices (TEKS.AQR.2F)

Topic B: Vectors

Lesson 5.3: Representing and Modeling with Vector Quantities (TEKS.AQR.2F)

Lesson 5.4: Performing Operations on Vectors (TEKS.AQR.2F)

Lesson 5.5: Determinants and Vectors (TEKS.AQR.2F)

Topic C: Using Matrices to Solve Systems of Equations

Lesson 5.6: Representing a System of Linear Equations as a Single Matrix (TEKS.AQR.2F)

Lesson 5.7: Finding the Inverse of a Matrix and Using It to Solve
a System of Equations (TEKS.AQR.2F)

Performance Tasks

Computer Animation with Matrices (TEKS.AQR.2F)

Problem Solving with Matrices (TEKS.AQR.2F)

Answer Keys

Unit 5 Assessment

Unit 6: Finance

Topic A: Income

Lesson 6.1: Creating Equations and Inequalities—Gross Pay (TEKS.AQR.3F)

Lesson 6.2: Creating Equations in Context—Net Pay (TEKS.AQR.3F)

Lesson 6.3: Income and Constraints (TEKS.AQR.3F)

Topic B: Credit

Lesson 6.4: Solving Linear Equations—Simple Interest (TEKS.AQR.3G)

Lesson 6.5: Analyzing Credit Offers with Linear and
Exponential Equations (TEKS.AQR.3G)

Topic C: Loans and Financed Purchases

Lesson 6.6: Recursion and Sequences—Payment Plans (TEKS.AQR.3H)

Lesson 6.7: Finite Geometric Series—Amortized Loans (TEKS.AQR.3H)

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Topic D: Banking

Lesson 6.8: Interpreting Complicated Expressions—Bank Statements and Savings Accounts (TEKS.AQR.3H)

Lesson 6.9: Analyzing Savings Account Options Using Equations and Inequalities (TEKS.AQR.3H)

Topic E: Investing

Lesson 6.10: Interpreting Expressions and Equations—Stocks and Shares (TEKS.AQR.3H)

Lesson 6.11: Interpreting Stock Parameters (TEKS.AQR.3H)

Lesson 6.12: Reading Stock Reports (TEKS.AQR.3H)

Performance Task

Automobile Ownership (TEKS.AQR.3H)

Answer Keys

Unit 6 Assessment

Unit 7: Geometry

Topic A: Investigating Properties of Dilations

Lesson 7.1: Investigating Properties of Parallelism and the Center (TEKS.AQR.2C)

Lesson 7.2: Investigating Scale Factors (TEKS.AQR.2C)

Topic B: Defining and Applying Similarity

Lesson 7.3: Defining Similarity (TEKS.AQR.2D)

Lesson 7.4: Applying Similarity Using the Angle-Angle (AA) Criterion (TEKS.AQR.2D)

Topic C: Proving Similarity

Lesson 7.5: Proving Triangle Similarity Using Side-Angle-Side (SAS) and Side-Side-Side (SSS) Similarity (TEKS.AQR.2D)

Lesson 7.6: Working with Ratio Segments (TEKS.AQR.2D)

Lesson 7.7: Proving the Pythagorean Theorem Using Similarity (TEKS.AQR.2D)

Lesson 7.8: Solving Problems Using Similarity and Congruence (TEKS.AQR.2D)

Lesson 7.9: Special Right Triangles (TEKS.AQR.2D)

Topic D: Exploring Trigonometric Ratios

Lesson 7.10: Defining Trigonometric Ratios (TEKS.AQR.2D)

Lesson 7.11: Exploring Sine and Cosine As Complements (TEKS.AQR.2D)

Topic E: Applying Trigonometric Ratios

Lesson 7.12: Calculating Sine, Cosine, and Tangent (TEKS.AQR.2D)

Lesson 7.13: Problem Solving with the Pythagorean Theorem and Trigonometry (TEKS.AQR.2D)

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Topic F: Trigonometry of General Angles

Lesson 7.14: Proving the Law of Sines (TEKS.AQR.2D)

Lesson 7.15: Proving the Law of Cosines (TEKS.AQR.2D)

Lesson 7.16: Applying the Laws of Sines and Cosines (TEKS.AQR.2D)

Topic G: Using Truth Tables

Lesson 7.17: Using Truth Tables (TEKS.AQR.4G)

Answer Keys

Unit 7 Assessment