Guide to Mathematics Tutoring or Intervention Publications in Preparation for TAKS (Middle School)

The Pubs tabs below contains a listing of the Region 4 publications routinely used for TAKS math tutoring or intervention, as well as those publications used to prepare this document. Also included are the table of contents for most of these publications.

The Matrix tabs below contains a listing of all middle school math TEKS to be covered on the grade level tests with the associated TAKS objectives by grade level. Then listed are the locations in each of the included publications where reference to that TEKS SE or TAKS Objective may be found.

Since this document is done in EXCEL for electronic usage, any of contents may be sorted at the discretion of the user.

Publications for Math Tutoring and Intervention

TAKS Mathematics Preparation Grade 6 - Region 4 (2004)
Accelerated Curriculum for Mathematics Grade 6 TAKS - Region 4 (Sep 2006)

Sources Used for Math TEKS and TAKS

TAKS Information Booklet Mathematics Grade 6 - TEA (Mar 2007)

Accelerated Curriculum for Mathematics Grade 6 TAKS

Uses the 5E Model

Unit 1

Lesoon 1.1 Order of Operations
Lesson 1.2 Integers in Real Life
Lesson 1.3 Prime Factorization
Lesson 1.4 Greatest Common Factor
Lesson 1.5 Least Common Multiple
Lesson 1.6 Applications of GCF and LCM

Unit 2

Lesson 2.1 Equivalent Fractions
Lesson 2.2 Equivalent Decimals and Fractions
Lesson 2.3 Compare and Order Fractions and Decimals

Unit 3

Lesson 3.1 Using Models to Add and Subtract Fractions
Lesson 3.2 Fraction Addition and Subtraction
Lesson 3.3 Modeling Fraction Subtraction with Borrowing
Lesson 3.4 Operations with Fractions

Unit 4

Lesson 4.1 Measurement Conversions
Lesson 4.2 Representing Ratios
Lesson 4.3 Using Ratios to Describr Proportional Situations
Lesson 4.4 Making Predictions with Ratios

Unit 5

Lesson 5.1 Picturing Percents
Lesson 5.2 Circle Graphs and Percents
Lesson 5.3 Circles

Unit 6

Lesson 6.1 Arithmetic Sequences
Lesson 6.2 Formulating Equations

Unit 7

Lesson 7.1 Perimeter vs. Area
Lesson 7.2 Area of Triangles
Lesson 7.3 Area of Parallelograms and Trapezoids
Lesson 7.4 Perimeter and Area Application Problems

Unit 8

Lesson 8.1 Developing Formulas for Volume
Lesson 8.2 Application Problems Involving Time and Volume

Unit 9

Lesson 9.1 Angle Measurement
Lesson 9.2 Attributes of Angles in Triangles and Quadrilaterals

Unit 10

Lesson 10.1 Sample Spaces: Tree Diagrams and Lists

Lesson 10.2 Probability of Simple Events
Lesson 10.3 Graphs

Unit 11

Lesson 11.1 Modeling the Mean
Lesson 11.2 Medain, Mode and Range

TAKS Mathematics Preparation Grade 6 (Aug 2004)

Uses 5E Model

Objective 1 Numbers, Operations, and Quantitative Reasoning

Equivalent Rational Numbers Lesson
Addition and Subtraction of Fractions Lesson

Objective 2 Patterns, Relationships, and Algebraic Reasoning

Modeling Percents Lesson
Proportional Reasoning Lesson

Objective 3 Geometry and Spatial Reasoning

Circle Lesson
Coodinate Geometry Lesson
Angles Lesson

Objective 4 Concepts and Uses of Measurement

Problems Involving Length Lesson
Problems Involving Area Lesson
Measuring Angles Lesson

Objective 5 Probabilitty and Statistics

Combinations Lesson
Circle Graph Lesson

Objective 6 Mathematical Processes and Tools

Critical Thinking Through Problem Solving

Publications for Math Tutoring and Intervention

TAKS Mathematics Preparation Grade 7 - Region 4 (2004)
Making Connections with Measurement Grade 7 TAKS (Apr 2005)
(not purchased by the district, however, it is available through Region 4)
Accelerated Curriculum for Mathematics Grade 7 TAKS - Region 4 (Nov 2006)

Sources Used for Math TEKS and TAKS

TAKS Information Booklet Mathematics Grade 7 - TEA (Mar 2007)

Accelerated Curriculum for Mathematics Grade 7 TAKS

Uses the 5E Model

Unit 1

Lesoon 1.1 Comparing and Ordering Integers
Lesson 1.2 Addition of Integers
Lesson 1.3 Subtraction of Integers
Lesson 1.4 Multiplication and Division of Integers
Lesson 1.5 Order of Operations

Unit 2

Lesson 2.1 Comparing and Ordering Positive Rational Numbers
Lesson 2.2 Addition and Subtraction of Fractions

Unit 3

Lesson 3.1 Multiplication of Fractions
Lesson 3.2 Multiplication of Decimals
Lesson 3.3 Division of Fractions
Lesson 3.4 Division of Decimals
Lesson 3.5 Application of Multiplication and Division with Fractions and Decimals

Unit 4

Lesson 4.1 Connecting Fractions, Decimals and Percents
Lesson 4.2 Applications of Pecent

Unit 5

Lesson 5.1 Unit Rate
Lesson 5.2 Attributes of Similar Figures
Lesson 5.3 Proportional Relationships
Lesson 5.4 Proportions

Unit 6

Lesson 6.1 Arithmetic Sequences
Lesson 6.2 Perimeter, Area and Circumference
Lesson 6.3 Reflections and Translations on the Coordinate Plane

Unit 7

Lesson 7.1 Formulas for Problem Situations
Lesson 7.2 Solving Equations Using Concrete Models

Unit 8

Lesson 8.1 Complementary and Supplementary Angles
Lesson 8.2 Classifying Triangles
Lesson 8.3 Classifying Quadrilaterals
Lesson 8.4 Modeling Squares and Square Roots
Lesson 8.5 Generating and Using the Area Formula for Circles
Lesson 8.6 Finding Area of Polygons and Other Shapes

Unit 9

Lesson 9.1 Nets and Three-Dimensional Figures
Lesson 9.2 Three Dimensional Views
Lesson 9.3 Volumes of Prisms and Cylinders

Unit 10

Lesson 10.1 Sample Spaces
Lesson 10.2 Probability
Lesson 10.3 Bar Graphs and Circle Graphs
Lesson 10.4 Venn Diagrams
Lesson 10.5 Mean, Median, Mode and Range
Lesson 10.6 Choose an Appropriate Statistic

TAKS Mathematics Preparation Grade 7 (2004)
(not purchased by the district, however, it is available through Region 4)

Uses 5E Model

Objective 1 Numbers, Operations, and Quantitative Reasoning

Equivalence Lesson
Multiplication of Fractions Lesson
Unit Rate Lesson

Objective 2 Patterns, Relationships, and Algebraic Reasoning

Multiple Representations Lesson
Concrete Models to Solve Equations Lesson
Give Me a Lever and I Will Move the World Lesson

Objective 3 Geometry and Spatial Reasoning

Coordinate Translation Lesson
Similarity Lesson
Classification Lesson

Objective 4 Concepts and Uses of Measurement

Perimeter and Area Lesson
Surface Area and Volume Lesson

Objective 5 Probabilitty and Statistics

Measures of Central Tendency Lesson
Modeling Probability Lesson

Objective 6 Mathematical Processes and Tools

Critical Thinking Through Problem Solving

Making Connections with Measurement Grade 7 TAKS (2005)

Uses 5E Model

Instructional Support

Problem-Solving Strategies
Questioning Strategies
Cooperative Learning
Reading and Vocabulary
Estimation and Prediction
Assessment

Dimensional Analysis

Teacher Lesson Presentation Notes
Teacher Solutions
Transparency and Activity Masters
Student Activity Pages

Critical Atributes of Similarity
- Teacher Lesson Presentation Notes
- Teacher Solutions
- Transparency and Activity Masters
- Student Activity Pages

Area: Circles
- Teacher Lesson Presentation Notes
- Teacher Solutions
- Transparency and Activity Masters
- Student Activity Pages

Area, Perimeter, Circumference
- Teacher Lesson Presentation Notes
- Teacher Solutions
- Transparency and Activity Masters
- Student Activity Pages

Volume
- Teacher Lesson Presentation Notes
- Teacher Solutions
- Transparency and Activity Masters
- Student Activity Pages

Publications for Math Tutoring and Intervention

TAKS Mathematics Preparation Grade 8 - Region 4 (2003)
Making Connections with Measurement Grade 8 TAKS (Apr 2005)
(not purchased by the district, however, it is available through Region 4)
Accelerated Curriculum for Mathematics Grade 8 TAKS - Region 4 (Sep 2007)

Sources Used for Math TEKS and TAKS

TAKS Information Booklet Mathematics Grade 8 - TEA (Mar 2007)

Accelerated Curriculum for Mathematics Grade 8 TAKS

Uses the 5E Model

Unit 1
- Lesoon 1.1 Compare and Order Rational Numbers
- Lesson 1.2 Scientific Notation
- Lesson 1.3 Operations with Positive Rational Numbers
- Lesson 1.4 Operations with Rational Numbers

Unit 2
- Lesson 2.1 Percents
- Lesson 2.2 Percents and Proportions
- Lesson 2.3 Equivalent Rates and Ratios

Unit 3
- Lesson 3.1 Similar Figures
- Lesson 3.2 Proportional Relationships
- Lesson 3.3 Proportional and Non-proprtional Relationships

Unit 4
- Lesson 4.1 Multiple Representations
- Lesson 4.2 Sequences

Unit 5
- Lesson 5.1 Traanslations and Reflections
- Lesson 5.2 Dilations

Unit 6
- Lesson 6.1 Approximating Values of Irrational Numbers
- Lesson 6.2 Pythagorean Theorem

Unit 7
- Lesson 7.1 Perimeter, Circumference and Area
- Lesson 7.2 Effects of Proportional Change on Perimeter
- Lesson 7.3 Effects of Proportional Change on Area

Unit 8
- Lesson 8.1 Complementary and Supplementary Angles
- Lesson 8.2 Classifying Triangles

Unit 9
- Lesson 9.1 Developing Fomulas for Volume
- Lesson 9.2 Applications of Volume
- Lesson 9.3 Effects of Proportional Change on Volume

Unit 10
- Lesson 10.1 Probability
- Lesson 10.2 Scatterplots
- Lesson 10.3 Statistical Measures of Data
- Lesson 10.4 Displaying and Evaluating Data

TAKS Mathematics Preparation Grade 8 (2003)

Uses 5E Model

Objective 1 Numbers, Operations, and Quantitative Reasoning

- Operations Using Rational Numbers Lesson
- Irrational Numbers Lesson
- Scale Model Lesson

Objective 2 Patterns, Relationships, and Algebraic Reasoning

- Proportional and Non0proportional Lesson
- Percents, Similarity, and Rates Lesson
- Patterns and Sequences Lesson

Objective 3 Geometry and Spatial Reasoning

- Coordinate Translation Lesson
- Coordinate Rotation Lesson
- Coordinate Reflection Lesson
- Coordinate Dilations Lesson
- What's Your View on This? Lesson
- Pythagorean Theorem Lesson

Objective 4 Concepts and Uses of Measurement

- Surface Area and Volume Lesson

Objective 5 Probabilitty and Statistics

- Probability Lesson
- Central Tendency Lesson

Objective 6 Mathematical Processes and Tools

- Critical Thinking Through Problem Solving

Making Connections with Measurement Grade 8 TAKS
(not purchased by the district, however, it is available through Region 4)

Uses 5E Model

Instructional Support

- Problem-Solving Strategies
- Questioning Strategies
- Cooperative Learning
- Reading and Vocabulary
- Estimation and Prediction
- Assessment

Pythagorean Theorem

- Teacher Lesson Presentation Notes
- Teacher Solutions
- Transparency and Activity Masters
- Student Activity Pages

Dimensional Analysis

- Teacher Lesson Presentation Notes
- Teacher Solutions
- Transparency and Activity Masters
- Student Activity Pages

Area: Effects of Proportional Changes

- Teacher Lesson Presentation Notes
- Teacher Solutions

Transparency and Activity Masters
Student Activity Pages

Surface Area: Effects of Proportional Changes

Teacher Lesson Presentation Notes
Teacher Solutions
Transparency and Activity Masters
Student Activity Pages

Volume: Effects of Proportional Changes

Teacher Lesson Presentation Notes
Teacher Solutions
Transparency and Activity Masters
Student Activity Pages

Volume: Pyramids and Cones

Teacher Lesson Presentation Notes
Teacher Solutions
Transparency and Activity Masters
Student Activity Pages

Volume: Spheres

Teacher Lesson Presentation Notes
Teacher Solutions
Transparency and Activity Masters
Student Activity Pages

Middle School TEKS & TAKS		Region 4 Tutoring or Intervention Publications	
TEKS SE	**TAKS Objective Grade 6**	**Accelerated Curriculum Grade 6 Lesson #**	**TAKS Prep Grade 6 Objective #**
6.1(A)	**1**	2.3	Equivalent Rational Numbers
6.1(B)	**1**	2.1, 2.2, 2.3, 10.2	Equivalent Rational Numbers
6.1(C)	**1**	1.2	
6.1(D)	**1**	1.3	
6.1(E)	**1**	1.4,1.6	
6.1(F)	**1**	1.5,1.6	
6.2(A)	**1**	3.1,3.2,3.3,3.4	Addition and Subtraction of Fractions
6.2(B)	**1**	3.1,3.2,3.3,3.4	Addition and Subtraction of Fractions
6.2(C)	**1**	4.1, 4.2	
6.2(D)	**1**	3.1,3.4	
6.2(E)	**1**	1.1	
6.3(A)	**2**	4.2, 4.3, 4.4	Proportional Reasoning
6.3(B)	**2**	4.2, 5.1, 5.2	Modeling %, Proportional Reasoning
6.3(C)	**2**	4.2, 4.3, 4.4	Proportional Reasoning
6.4(A)	**2**	4.3, 6.1	Proportional Reasoning
6.4(B)	**2**	7.1, 7.2, 7.3, 7.4, 8.1	Proportional Reasoning
6.5 (A)	**2**	6.2	Proportional Reasoning
6.6(A)	**3**	9.1	Angles
6.6(B)	**3**	9.2	Angles
6.6(C)	**3**	5.3	Circle
6.7(A)	**3**	4.2, 4.3	Coordinate Geometry
6.8(A)	**4**	5.3, 7.1, 7.2, 7.3, 7.4	
6.8(B)	**4**	7.1, 7.2, 7.3, 7.4, 8.2	Length, Area
6.8(C)	**4**	9.1, 9.2	Measuring Angles
6.8(D)	**4**	4.1	
6.9(A)	**5**	10.1	Combinations
6.9(B)	**5**	10.2	
6.10(A)	**5**	10.3	
6.10(B)	**5**	11.1, 11.2	
6.10(C)	**5**	5.2	Circle Graph
6.10(D)	**5**	10.3, 11.1, 11.2	
6.11(A)	**6**	1.1, 1.2, 2.3, 3.1, 3.2, 3.4, 4.3, 4.4, 5.1, 5.2, 5.3, 7.3, 7.4, 8.1, 8.2, 9.1, 10.2, 10.3	Critical Thinking
6.11(B)	**6**	1.6, 3.1, 3.4, 5.3, 8.2	Critical Thinking
6.11(C)	**6**	1.3, 3.3, 3.4, 11.1, 11.2	Critical Thinking
6.11(D)	**6**	2.1, 2.2, 2.3, 9.1, 9.2, 10.3, 11.1, 11.2	Critical Thinking

6.12(A)	**6**	1.4, 1.5, 1.6, 3.2, 3.3, 3.4, 4.1, 4.2, 4.3, 4.4, 5.1, 5.2, 6.1, 6.2, 7.1, 7.2, 7.3, 7.4, 8.1, 10.1, 10.2, 11.1	Critical Thinking
6.12(B)	**6**	3.4, 10.3	Critical Thinking
6.13(A)	**6**	1.3, 1.4, 1.5, 2.2, 3.3, 4.1, 4.2, 4.3, 4.4, 5.1, 6.1, 7.1, 7.2, 7.3, 7.4, 8.1, 9.2, 10.1	Critical Thinking
6.13(B)	**6**	2.1, 9.2, 10.1	Critical Thinking

Middle School TEKS & TAKS		Region 4 Tutoring or Intervention Publications		
TEKS SE	**TAKS Obj Grade 7**	**Accelerated Curriculum Grade 7 Lesson #**	**Making Connections with Measurement Grade 7 TAKS**	**TAKS Prep Grade 7 Objective #**
7.1(A)	**1**	1.1, 2.1, 2.2		
7.1(B)	**1**	1.1, 2.1, 2.2		Equivalence
7.1(C)	**1**	8.4		
7.2(A)	**1**	3.1, 3.2, 3.3, 3.4, 3.5		
7.2(B)	**1**	2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5	Area, Perimeter & Circumference	Multiplication of Fractions, Unit Rate
7.2(C)	**1**	1.2, 1.3, 1.4		
7.2(D)	**1**	5.1		Unit Rate
7.2(E)	**1**	1.5		
7.2(F)	**1**	2.2, 5.3, 5.4		
7.2(G)	**1**	2.1, 3.3, 3.4, 5.3, 5.4		
7.3(A)	**2**	4.1, 4.2	Dimensional Analysis	
7.3(B)	**2**	4.1, 5.2, 5.3, 5.4	Similarity	
7.4(A)	**2**	6.2	Area of Circles	Multiple Representations, Lever/World
7.4(B)	**2**	6.2		Multiple Representations, Lever/World
7.4(C)	**2**	6.1		Multiple Representations, Lever/World
7.5(A)	**2**	7.2		Concrete Models to Solve Eqns
7.5(B)	**2**	7.1		
7.6(A)	**3**	8.1		Classification
7.6(B)	**3**	8.2, 8.3		Classification
7.6(C)	**3**	7.2, 9.1		Classification
7.6(D)	**3**	5.2	Similarity	Similarity
7.7(A)	**3**	6.3		
7.7(B)	**3**	6.3		Coordinate Translation
7.8(A)	**3**	9.2		
7.8(B)	**3**	9.1		
7.8(C)	**3**	8.6, 9.1		

7.9(A)	**4**	2.1, 8.5, 8.6	Dimensional Analysis; Similarity; Area of Circles; Area, Perimeter & Circumference	Perimeter & Area
7.9(B)	**4**	9.3	Volume	
7.9(C)	**4**	9.3	Dimensional Analysis, Volume	Surface Area & Volume
7.10(A)	**5**	10.1		Modeling Probability
7.10(B)	**5**	10.2		Modeling Probability
7.11(A)	**5**	10.3, 10.4		
7.11(B)	**5**	10.3, 10.4		Modeling Probability
7.12(A)	**5**	10.5, 10.6		Measures of Central Tendency
7.12(B)	**5**	10.6		Measures of Central Tendency
7.13(A)	**6**	1.1, 1.4, 1.5, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 4.1, 4.2, 5.1, 5.3, 5.4, 8.5, 8.6, 9.1, 9.3, 10,5		Critical Thinking
7.13(B)	**6**	4.2, 5.3, 5.4, 7.1, 10.2		Critical Thinking
7.13(C)	**6**	4.2, 7.1		Critical Thinking
7.13(D)	**6**	2.1, 2.2, 3.1, 3.2, 4.1, 5.1, 5.3, 5.4, 7.2, 9.2, 10.2, 10.3, 10.4		Critical Thinking
7.14(A)	**6**	1.2, 1.3, 4.1, 6.1, 6.2, 6.3, 7.2, 8.1, 8.2, 8.3, 8.4, 9.1, 10.1, 10.5, 10.6		Critical Thinking
7.14(B)	**6**	10.1, 10.3, 10.4, 10.5, 10.6		Critical Thinking
7.15(A)	**6**	1.1, 1.4, 3.3, 3.4, 4.5, 4.1, 5.2, 6.1, 8.1, 8.2, 8.3, 10.1, 10.3, 10.4, 10.6	Dimensional Analysis	Critical Thinking
7.15(B)	**6**	1.2, 1.3, 2.1, 5.2, 10.1, 10.2, 10.6		Critical Thinking

Middle School TEKS & TAKS		Region 4 Tutoring or Intervention Publications		
TEKS SE	**TAKS Objective Grade 8**	**Accelerated Curriculum Grade 8 Lesson #**	**Making Connections with Measurement Grade 8 TAKS**	**TAKS Prep Grade 8 Objective #**
8.1(A)	**1**	1.1, 2.3	Dimensional Analysis	
8.1(B)	**1**	1.3, 1.4, 2.1, 2.2, 2.3		Rational Numbers
8.1(C)	**1**	6.1, 6.2		Irrational Numbers
8.1(D)	**1**	1.2		
8.2(A)	**1**	1.3, 1.4, 3.3		Rational Numbers
8.2(B)	**1**	1.3, 1.4, 2.1, 2.2, 3.3, 6.2, 7.1, 9.2	Dimensional Analysis	Rational Numbers
8.2(C)	**1**	1.3, 1.4, 2.1, 2.2, 3.3, 6.1		Scale Model
8.2(D)	**1**	3.3		Scale Model
8.3(A)	**2**	2.2, 2.3, 3.2, 3.3		Proportional & Non
8.3(B)	**2**	2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 7.2, 7.3, 9.3	Dimensional Analysis	%, Similarity and Rates
8.4(A)	**2**	2.3, 3.2, 3.3, 4.1, 4.2		
8.5(A)	**2**	2.3, 3.2, 3.3, 4.1, 4.2		
8.5(B)	**2**	4.2		Patterns & Sequences
8.6(A)	**3**	3.1, 5.2		Coordinate Dilation
8.6(B)	**3**	5.1, 5.2		Coordinate Translation, Rotation, Reflection, Dilation
8.7(A)	**3**	8.2		Your View?
8.7(B)	**3**	7.1, 7.2		
8.7(C)	**3**	6.2	Pythag Theorem	Pythag Theorem
8.7(D)	**3**	3.3, 5.1, 5.2		
8.8(A)	**4**	8.1	Surface Area: Effects of Proportional Changes	
8.8(B)	**4**	9.1	Volume: Effects of Proportional Changes; Volume: Pyramids and Cones; Volume: Spheres	

8.8(C)	**4**	8.1, 9.1, 9.2	Surface Area: Effects of Proportional Changes; Volume: Effects of Proportional Changes; Volume: Pyramids and Cones; Volume: Spheres	Surface Area & Volume
8.9(A)	**4**	6.2, 7.1	Pythag Theorem	Surface Area & Volume
8.9(B)	**4**	3.1, 7.2, 9.3		
8.10(A)	**4**	7.2, 7.3	Area: Effects of Proportional Changes; Surface Area Effects of Proportional Changes	
8.10(B)	**4**	9.3	Volume: Effects of Proportional Changes	Surface Area & Volume
8.11(A)	**5**	10.1		Probability
8.11(B)	**5**	10.1		Probability
8.11(C)	**5**	10.1		
8.12(A)	**5**	10.3		Central Tendency
8.12(B)	**5**	10.2		
8.12(C)	**5**	10.4		
8.13(A)	**5**	10.4		
8.13(B)	**5**	10.4		
8.14(A)	**6**	2.1, 2.2, 2.3, 7.1, 8.2, 10.3		Critical Thinking
8.14(B)	**6**	1.1, 3.1, 9.2, 10.1, 10.3		Critical Thinking
8.14(C)	**6**	1.2, 1.3, 2.3, 3.1, 4.1, 4.2, 10.3		Critical Thinking
8.14(D)	**6**	1.3, 1.4, 1.4, 2.1, 2.2, 5.1, 6.1, 6.2, 9.1, 9.2, 10.1, 10.2, 10.3		Critical Thinking
8.15(A)	**6**	1.1, 1.2, 2.2, 3.3, 4.1, 4.2, 5.1, 5.2, 7.1, 8.1, 8.2, 10.1, 10.2		Critical Thinking
8.15(B)	**6**	3.2, 10.1, 10.2		Critical Thinking
8.16(A)	**6**	1.2, 2.1, 3.2, 3.3, 4.1, 4.2, 5.1, 6.1, 6.2, 7.2, 7.3, 9.1, 9.3, 10.2		Critical Thinking
8.16(B)	**6**	1.2, 1.3, 3.1, 3.2, 3.3, 4.1, 4.2, 5.1, 5.2, 8.1, 10.1, 10.2, 10.3, 10.4		Critical Thinking