

## Fundamentals of Geometry: 2- and 3-Dimensional Figures (Constructions)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
										I/M							
<b>District Objective</b> Use a variety of tools including paper foldings, miras, compass, straight edge, and geometers to enhance the understanding of midpoints, perpendicular bisector, angle bisector, and parallel and perpendicular lines.												<b>PASS Process Standard</b>		<b>Quarter I-IV</b> <b>No. Days</b> Integrated throughout			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> *D. Use geometric tools (e.g., protractor, compass, straight edge) to construct a variety of figures.												<b>NCTM Standard</b> Pg. 308					
<b>Text Correlation</b> Pg. 568								<b>Rating</b> 3		<b>Additional Resources</b> Fundamentals of Geometry Resource Guide I (FRG I): Construction, Mira Activities (Class Activity); Surprise Construction (Individual Project); Sample Constructions (Class Activity); Introduction to the Mira Worksheet; Bisecting Angles Worksheet; Constructing the Perpendicular Bisector of a Segment Worksheet; Symmetry Lines Worksheet; Number Puzzle; Game 47; Constructions 1-13; Geometry Constructions-A; Geometry Constructions; Measuring Angles Using Protractors Worksheet; Angle Bisectors; and Making and Using an Astrolabe Activities							
<b>Assessment</b>  Given $\triangle ABC$ , construct a triangle congruent to it by copying only the sides.																	

# Fundamentals of Geometry: 2- and 3-Dimensional Figures (Terminology)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal														
							I	E	E	M																			
<b>District Objective</b> Identify, define, and use the following vocabulary terms: point, line, plane, space, line segment, ray, perpendicular lines, parallel lines, and angle.												<b>PASS Process Standard II A</b>		<b>Quarter I</b> <b>No. Days</b> 12-1/2															
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																													
<b>PASS Objective</b> The student will...													<b>NCTM Standard</b> Pg. 308																
<b>Text Correlation</b> Chapter 1							<b>Rating</b> 2		<b>Additional Resources</b> FRG I: Terms: Visualization Awareness (Intro Activity); Segments and Angles (Worksheet); Lines, Intersection, Spaghetti (Class Activity); Optical Illusion (Project); Midpoint Activity (Class Construction); Segment Relationships (Individual Project); Measuring in Inches; Intersecting Planes (Class Activity); Distance Between a Line/Point (Class Activity); Tic Tac Toe Math #47 (Review Worksheet); Review of Points, Lines, Angles (Review Activity); Line Designs (Project); I Have-Who Has Card Game; Modeling Intersecting Planes; What Do You Have When You Wind Up A Mummy?; GEOMO Bingo Game; and Angle Pears Card Game Activities																				
<b>Assessment</b>  Match the picture with the correct word <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 40%;">1. point</td> <td style="width: 20%;">(a) <math>\leftrightarrow</math></td> </tr> <tr> <td>2. line</td> <td>(b) <math>\perp</math></td> </tr> <tr> <td>3. segment</td> <td>(c) <math>\bullet</math></td> </tr> <tr> <td>4. ray</td> <td>(d) <math>\sphericalangle</math></td> </tr> <tr> <td>5. parallel lines</td> <td>(e) <math>\rightarrow</math></td> </tr> <tr> <td>6. perpendicular lines</td> <td>(f) <math>\parallel</math></td> </tr> <tr> <td>7. angle</td> <td>(g) <math>\underline{\hspace{1cm}}</math></td> </tr> </table> <p style="margin-top: 20px;">Which does NOT describe the angle at the right?</p> <p>(a) <math>\sphericalangle A</math>      (b) <math>\sphericalangle CAB</math>      (c) <math>\sphericalangle ABC</math>      (d) <math>\sphericalangle BAC</math></p>																1. point	(a) $\leftrightarrow$	2. line	(b) $\perp$	3. segment	(c) $\bullet$	4. ray	(d) $\sphericalangle$	5. parallel lines	(e) $\rightarrow$	6. perpendicular lines	(f) $\parallel$	7. angle	(g) $\underline{\hspace{1cm}}$
1. point	(a) $\leftrightarrow$																												
2. line	(b) $\perp$																												
3. segment	(c) $\bullet$																												
4. ray	(d) $\sphericalangle$																												
5. parallel lines	(e) $\rightarrow$																												
6. perpendicular lines	(f) $\parallel$																												
7. angle	(g) $\underline{\hspace{1cm}}$																												

# Fundamentals of Geometry: Logical Reasoning

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
							I	E	E	E	E	E	E	E	M

<b>District Objective</b> Use inductive reasoning to make and test conjectures.	<b>PASS Process Standard</b> IA III A	<b>Quarter</b> I <b>No. Days</b> 1/2
--	---	---

ITBS  
  CRT  
  EXPLORE  
  EOI  
  PLAN  
  ACT  
  AP

<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> C. Use logical reasoning skills (inductive and deductive) to: 1. Make and test conjectures	<b>NCTM Standard</b> Pg. 342
--	---------------------------------

<b>Text Correlation</b> Pg. 27	<b>Rating</b> 2	<b>Additional Resources</b> Logic Problem Activity
-----------------------------------	--------------------	---

**Assessment**

Use inductive reasoning to predict the next two terms in the pattern.

1. 4, 8, 12, 16, . . .    (a) 32, 64      (b) 18, 20      (c) 20, 26      (d) 20, 24

2. 1, 15, 29, 43, . . .    (a) 65, 79      (b) 57, 71      (c) 51, 75      (d) 65, 83

# Fundamentals of Geometry: Logical Reasoning

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
							I	E	E	E	E	E	E	E	M

<b>District Objective</b> Formulate counterexamples.	<b>PASS Process Standard III A, C</b>	<b>Quarter I No. Days 1/2</b>
---	---	---

ITBS  
  CRT  
  EXPLORE  
  EOI  
  PLAN  
  ACT  
  AP

<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> C. Use logical reasoning skills (inductive and deductive) to: 2. Formulate counterexamples	<b>NCTM Standard Pg. 342</b>
--	--------------------------------------

<b>Text Correlation</b> Pgs. 27-29	<b>Rating</b> 2	<b>Additional Resources</b> Figure Patterns Activity
---------------------------------------	--------------------	---

**Assessment**

Describe a counterexample that could demonstrate that the statement is false.

1. If I got all of my vitamin C, then I drank orange juice.
2. If the car is blue, then it is a Mustang.
3. If snow is falling, then the temperature is below freezing.



<b>Fundamentals of Geometry: Logical Reasoning</b>																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Judge the validity of arguments.												<b>PASS Process Standard III B</b>		<b>Quarter I</b> <b>No. Days</b> 1/2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																
<b>PASS Objective</b> The student will...														<b>NCTM Standard</b> Pg. 342		
<b>I. Logical Reasoning</b> C. Use logical reasoning skills (inductive and deductive) to: 4. Judge the validity of arguments																
<b>Text Correlation</b> Pgs. 27-29						<b>Rating</b> 2		<b>Additional Resources</b> FRG I: Logical Reasoning - Using Reasoning to Make Decisions (Project); Negation, Conditional, Converse, Inverse, and Contrapositive Activity								
<b>Assessment</b>  “If the opposite angles of a quadrilateral are congruent, the quadrilateral is a parallelogram.” Is the converse True or False?																

<b>Fundamentals of Geometry: Logical Reasoning</b>																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I						
<b>District Objective</b> Follow and construct logical arguments.												<b>PASS Process Standard</b> II B III B		<b>Quarter I</b> <b>No. Days</b> 1/2		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ● PLAN ● ACT ○ AP																
<b>PASS Objective</b> The student will...												<b>NCTM Standard</b> Pg. 342				
<b>I. Logical Reasoning</b> C. Use logical reasoning skills (inductive and deductive) to: 5. Construct simple valid arguments																
<b>Text Correlation</b> Pgs. 76, 146, 161, 192, 241						<b>Rating</b> 2		<b>Additional Resources</b> Conditional, Converse, Inverse, Contrapositive Activity; Protractor Activity								
<b>Assessment</b>																
Write a paragraph proof.																
Given: $\overline{PR} \cong \overline{LN}$																
$Q$ is the midpoint of $\overline{PR}$ .																
$M$ is the midpoint of $\overline{LN}$ .																
Pr ove: $PQ = LM$																

# Fundamentals of Geometry: Angles and Triangles

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I/M					
<b>District Objective</b> Classify, identify, name and measure types of angles.												<b>PASS Process Standard</b>		<b>Quarter I</b> <b>No. Days</b> 4	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will...													<b>NCTM Standard</b> Pg. 308		
<b>Text Correlation</b> Chapter 2						<b>Rating</b> 2		<b>Additional Resources</b> FRG: Angles - Activity Sheet 23 (Practice Worksheet-Measuring Angles); Worksheet 123 (Practice Worksheet - Measuring Angles); Worksheet 1-6 (Practice Worksheet - Measuring Angles and Segments); Measurement: Fly a Kite (Individual Activity); Straight Angle Flush (Game); Measuring & Labeling Angles Activity; Shape, Space and Measure Internet Resource							
<b>Assessment</b>															
1. The measure of the angle in degrees is:								2. An angle with measure $180^\circ$ is a(n) angle.							
(a) $20^\circ$								(a) acute							
(b) $80^\circ$								(b) right							
(c) $90^\circ$								(c) obtuse							
(d) $40^\circ$								(d) straight							
3. Estimate the measure of the angle.															
(a) about $180^\circ$															
(b) about $45^\circ$															
(c) about $65^\circ$															
(d) about $25^\circ$															

# Fundamentals of Geometry: Angles and Triangles

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I/M					
<b>District Objective</b> Identify, define, and use the following vocabulary terms: vertical angles, complementary angles, supplementary angles, linear pair, perpendicular bisector, angle bisector, midpoint, congruent.												<b>PASS Process Standard</b>		<b>Quarter I</b> <b>No. Days</b> 3	
○ ITBS   ○ CRT   ○ EXPLORE   ○ EOI   ● PLAN   ● ACT   ○ AP															
<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> A. Deduce properties and relationships of figures from given assumptions and information to show: 2. Relationships between pairs of angles (e.g., adjacent, complementary, vertical).													<b>NCTM Standard</b> Pg. 308		
<b>Text Correlation</b> Chapter 2								<b>Rating</b> 2		<b>Additional Resources</b> FRG I: Angles - Intro First Paper Folding Activity; Math Modeling (Class Activity - 3 pgs.); Vertical Angles (Group Activity); Make Yourself a Star Activity					
<p>1. In the figure shown, <math>m\angle AED = 133</math>. Which of the following statements is false?</p> <p>(a) <math>\angle BEC</math> and <math>\angle CED</math> are adjacent angles.                      (b) <math>\angle AEB</math> and <math>\angle DEC</math> are vertical angles                      (c) <math>m\angle AEB = 47</math>                      (d) <math>m\angle BEC = 47^\circ</math></p> <p><b>Assessment</b></p> <p>2. Solve: In the figure (not drawn to scale), <math>\vec{MO}</math> bisects <math>\angle LMN</math>, <math>m\angle LMO = 13x - 24</math>, and <math>m\angle NMO = x + 84</math>. Solve for <math>x</math> and find <math>m\angle LMN</math>.</p> <p>(a) 5, <math>33^\circ</math>                      (b) 9, <math>186^\circ</math>                      (c) 9, <math>141^\circ</math>                      (d) 5, <math>41^\circ</math></p>															

<b>Fundamentals of Geometry: Angles and Triangles</b>																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Solve problems using properties of angles (e.g., interior, exterior, complementary, vertical, angle sums, 30-60-90).												<b>PASS Process Standard</b>		<b>Quarter I</b> <b>No. Days</b> 3		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ● PLAN ● ACT ○ AP																
<b>PASS Objective</b> The student will... <b>IV. Angles and Triangles</b> A. Solve problems using properties of angles (e.g. interior, exterior, complementary, vertical, angle sums, 30-60-90).														<b>NCTM Standard</b> Pg. 334		
<b>Text Correlation</b> 2.6, Pgs. 57-59						<b>Rating</b> 2		<b>Additional Resources</b> FRG I: Angles - Tic Tac Toe Math # 45 (Worksheet); Vertical & Linear Pair, Perpendicular Lines Activity								
<b>Assessment</b> 1. If $m\angle A = 79^\circ$ , the measure of a complement of $\angle A$ is:  (a) $101^\circ$ (b) obtuse (c) $11^\circ$ (d) $90^\circ$  2. Find the measure of a complementary angle, supplementary angle, and a vertical angle for a $97^\circ$ angle.  (a) 3, 83, 97                      (b) -7, 83, 83 (c) none, 97 83                    (d) none, 83, 97																

<b>Fundamentals of Geometry: 2- and 3-Dimensional Figures</b> (Polygons)																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Determine if a polygon is concave or convex.												<b>PASS Process Standard</b> V A		<b>Quarter</b> I <b>No. Days</b> 1		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ● PLAN ● ACT ○ AP																
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> A. Draw and analyze 2- and 3-dimensional figures.														<b>NCTM Standard</b> Pg. 308		
<b>Text Correlation</b> 3.1, Pg. 69-72								<b>Rating</b> 1		<b>Additional Resources</b> Faces, Edges, Vertices Activity; Polyhedron Activity						
<b>Assessment</b>  The figures that are concave polygons are:  (a) A and E (b) A (c) C, D, and F (d) B, C, and F																

<b>Fundamentals of Geometry: 2- and 3-Dimensional Figures</b> (Polygons)																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
								I		M						
<b>District Objective</b> Classify triangles by sides and angles.												<b>PASS Process Standard</b> V A		<b>Quarter</b> I <b>No. Days</b> 2		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ● PLAN ● ACT ○ AP																
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> A. Draw and analyze 2- and 3-dimensional figures.														<b>NCTM Standard</b> Pg. 308		
<b>Text Correlation</b> 3.2, Pg. 73					<b>Rating</b> 1			<b>Additional Resources</b> FRG I: Polygons - Making Equilateral Triangles (Activity); See How They Roll (Worksheet); <u>Intro to Geometry</u> Pgs. 13-14; Identifying Triangles by Their Angles and Sides Internet Activity								
<b>Assessment</b>  1. Judging by appearance, the triangle is a(n) _____ triangle. (a) acute (b) right (c) isosceles (d) obtuse  2. Judging by appearance, the triangle is a(n) _____ triangle. (a) isosceles right (b) acute scalene (c) equilateral (d) obtuse scalene																

<b>Fundamentals of Geometry: 2- and 3-Dimensional Figures</b> (Polygons)																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Classify polygons based on number of sides.												<b>PASS Process Standard</b> V A		<b>Quarter I No. Days</b> 3		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																
<b>PASS Objective</b> The student will...														<b>NCTM Standard</b> Pg. 308		
<b>II. Properties of 2-and 3-Dimensional Figures</b> A. Draw and analyze 2- and 3-dimensional figures.																
<b>Text Correlation</b> 3.3						<b>Rating</b> 2		<b>Additional Resources</b> FRG I: Polygons - Tic Tac Toe # 48 (Worksheet); Geoboard Exercises (Class Activity); The Shape of Things (Worksheet); Make Yourself a Star (Class Activity); Hexaflexagons (Class Activity); Polygon Definitions (Class Activity); Geometry Terms Activity (Group Project); Pattern Block Activity; Polygon Color Sheets (Individual Project); Name That Polygon (Individual Activity); Shape, Space, and Measure Internet Activity								
<b>Assessment</b>  Judging by appearance, the figure that is a regular hexagon is:  (a) <span style="margin-left: 200px;">(b)</span>    (c) <span style="margin-left: 200px;">(d)</span>																

## Fundamentals of Geometry: 2- and 3-Dimensional Figures (Polygons)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
							I	E	E	M							
<b>District Objective</b> Sketch and classify 3-dimensional figures as prisms, pyramids, cones, cylinders, and spheres.												<b>PASS Process Standard</b> V A		<b>Quarter</b> I <b>No. Days</b> 3			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> A. Draw and analyze 2- and 3-dimensional figures.													<b>NCTM Standard</b> Pgs. 308, 360				
<b>Text Correlation</b> 3.4, Pgs. 81-82 3.5, Pgs. 84-85							<b>Rating</b> 1		<b>Additional Resources</b> FRG I: Polygons - Pop-Up Dodecahedron (Individual Project); Built It (Group Activity); Platonic Solids Internet Activity; Polygons (Your Own Mind) Activity								
<b>Assessment</b>  1. Use the view to name the solid. (a) triangular prism                      (b) triangular pyramid (c) pentagonal prism                      (d) square pyramid  2. Use the view to name the solid. (a) rectangular prism                      (b) square pyramid (c) cylinder                                      (d) cube  3. The figure below is a net for a rectangular solid. True or False?																	



# Fundamentals of Geometry: 2- and 3-Dimensional Figures

## (Triangle Congruence)

K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal		
										I/M							
<b>District Objective</b> Identify the corresponding parts of congruent triangles.												<b>PASS Process Standard</b> I B		<b>Quarter</b> I <b>No. Days</b> 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> B. Determine and use the relationships of <b>congruency</b> and similarity to determine unknown values.												<b>NCTM Standard</b> Pg. 342					
<b>Text Correlation</b> 4.1, Pgs. 100 & 103						<b>Rating</b> 2		<b>Additional Resources</b> FRG II: Congruence-Matching Activity (Intro Worksheet); Congruence Cross Cuts (Class Activity)									
<b>Assessment</b>  1. If $AMHE \cong PGQFL$ , then _____ $\cong \angle Q$ . (a) $\angle A$ (b) $\angle M$ (c) $\angle H$ (d) $\angle E$  2. If $HTEN \cong JRSM$ , then $\overline{ET} \cong$ (a) $\overline{MJ}$ (b) $\overline{SJ}$ (c) $\overline{MR}$ (d) $\overline{SR}$																	

## Fundamentals of Geometry: Angles and Triangles

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal						
										I/M											
<b>District Objective</b> Apply the relationship between base angles and the sides of an isosceles triangle.												<b>PASS Process Standard</b> IV A		<b>Quarter II</b> <b>No. Days</b> 3							
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																					
<b>PASS Objective</b> The student will... <b>IV. Angles and Triangles</b> A. Solve problems using properties of angles (e.g., interior, exterior, <b>complementary</b> , vertical, angle sums, 30-60-90).													<b>NCTM Standard</b> Pgs. 308, 320								
<b>Text Correlation</b> 5.1, Pg. 129								<b>Rating</b> 2		<b>Additional Resources</b> Isosceles Triangles Activity											
<b>Assessment</b>  1. The congruent angles of $\triangle ABC$ are (a) $\angle A$ and $\angle B$ (b) $\angle B$ and $\angle C$ (c) $\angle A$ and $\angle C$ (d) $\angle A$ , $\angle B$ and $\angle C$																2. The congruent sides of $\triangle GHK$ are: (a) $\overline{GH}$ , $\overline{HK}$ , and $\overline{GK}$ (b) $\overline{GH}$ and $\overline{HK}$ (c) $\overline{GH}$ and $\overline{GK}$ (d) $\overline{HK}$ and $\overline{GK}$					

## Fundamentals of Geometry: Angles and Triangles

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I/M					
<b>District Objective</b> Identify the altitude in relation to the base of a triangle.												<b>PASS Process Standard</b> IV A		<b>Quarter</b> II <b>No. Days</b> 2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will... <b>IV. Angles and Triangles</b> A. Solve problems using properties of angles (e.g., interior, exterior, <b>complementary</b> , vertical, angle sums, 30-60-90).													<b>NCTM Standard</b> Pg. 308		
<b>Text Correlation</b> 5.2, Pg. 133								<b>Rating</b> 2		<b>Additional Resources</b> Folding Triangles Activity					
<b>Assessment</b>  A perpendicular segment from a vertex of a triangle to the line containing the opposite side is called															
(a) a median (b) an altitude (c) a perpendicular bisector (d) an angle bisector															

## Fundamentals of Geometry: Angles and Triangles

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Identify and use perpendicular bisectors and angle bisectors.												<b>PASS Process Standard</b> IV A	<b>Quarter</b> II <b>No. Days</b> 3			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																
<b>PASS Objective</b> The student will... <b>IV. Angles and Triangles</b> A. Solve problems using properties of angles (e.g., interior, exterior, <b>complementary</b> , vertical, angle sums, 30-60-90).													<b>NCTM Standard</b> Pg. 308			
<b>Text Correlation</b> 5.3, Pg. 138								<b>Rating</b> 2	<b>Additional Resources</b> FRG II: Triangles - Finding the Incenter, Orthocenter and Circumcenter (Class Activity).							
<b>Assessment</b>  Solve: In the figure (not drawn to scale), $\vec{MO}$ bisects $\angle LMN$ , $m\angle LMO = 19x - 36$ , and $m\angle NMO = x + 144$ . Solve for $x$ and find $m\angle LMN$ .  (a) 10, $311^\circ$ (b) 6, $46^\circ$ (c) 10, $308^\circ$ (d) 6, $78^\circ$																

## Fundamentals of Geometry: Angles and Triangles (Inequalities)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
										I/M							
<b>District Objective</b> Use inequalities involving side lengths and angle measures of triangles.												<b>PASS Process Standard</b>		<b>Quarter II</b> <b>No. Days</b> 3			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will...													<b>NCTM Standard</b> Pg. 320				
<b>Text Correlation</b> 5.5, Pg. 145						<b>Rating</b> 2		<b>Additional Resources</b> FRG II: Triangles - GeoStrip Exploration (Class Activity); Trying Triangles (Activity Worksheet); Triangle Inequality Theorem (Notes); Toothpick Activity (Reinforcement Activity); Inequalities for Sides and Angles of Triangles Activity									
<b>Assessment</b> 1. The smallest angle of $\triangle ABC$ is <ol style="list-style-type: none"> <li><math>\angle A</math></li> <li><math>\angle B</math></li> <li><math>\angle C</math></li> <li>can't tell</li> </ol>																3. Which statement must be true: <ol style="list-style-type: none"> <li><math>PN &lt; QP</math></li> <li><math>MP &lt; PN</math></li> <li><math>MP = MN</math></li> <li><math>MN &lt; QM</math></li> </ol>	
2. The longest side of $\triangle DEF$ is <ol style="list-style-type: none"> <li><math>\overline{DE}</math></li> <li><math>\overline{EF}</math></li> <li><math>\overline{DF}</math></li> <li>can't tell</li> </ol>																	

# Fundamentals of Geometry: 2- and 3-Dimensional Figures

## (Triangle Congruence)

K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal		
										I/M							
<b>District Objective</b> Show triangles are congruent by SSS, SAS, ASA, and AAS.												<b>PASS Process Standard</b>		<b>Quarter II</b> <b>No. Days</b> 5			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will...													<b>NCTM Standard</b> Pg. 342				
<b>Text Correlation</b> 6.1, Pg. 165, 6.2, Pg. 159, 6.3, Pg. 163, 6.4, Pg. 166								<b>Rating</b> 2		<b>Additional Resources</b> <u>Intro to Geometry</u> , Pgs. 28-31							
<b>Assessment</b>																	
1. Choose the postulate or theorem that proves the pair of triangles congruent. A.								2. Choose the additional congruence you would need to know in order to show that the triangles are congruent by the indicated method. A. SSS									
(a) SSS				(b) ASA				(a) $\overline{AB} \cong \overline{DF}$				(b) $\overline{AC} \cong \overline{EF}$					
(c) SAS				(d) AAS				(c) $\overline{AC} \cong \overline{DF}$				(d) $\overline{AB} \cong \overline{AC}$					
B.								B. ASA									
(a) SSS				(b) ASA				(c) SAS				(d) AAS					

# Fundamentals of Geometry: 2- and 3-Dimensional Figures

## (Triangle Congruence)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
										I/M							
<b>District Objective</b> Use corresponding parts to find measures in congruent triangles.												<b>PASS Process Standard</b>		<b>Quarter II</b> <b>No. Days</b> 3			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> <b>B.</b> Determine and use the relationships of <b>congruency</b> and <b>similarity</b> to determine unknown values.												<b>NCTM Standard</b> Pg. 320					
<b>Text Correlation</b> 6.6, Pg. 177						<b>Rating</b> 3		<b>Additional Resources</b> FRG II: Triangle Congruence - Tigger Color Sheet (Worksheet); Geometry War! Activity									
<b>Assessment</b> 1. $\triangle KLM \cong \triangle KLM$ Given: $m\angle LMK = (7x - 28)^\circ$ ; $\overline{LM} = 4y + 5$ ; $m\angle KML = 84^\circ$ ; $\overline{LM} = 15$ (a) Find the value of $x$ . (b) Find the value of $y$ .  (a) a. $x = 560$ (b) a. $x = 28$ (c) a. $x = 16$ (d) a. $x = 8$ b. $y = 65$ b. $y = \frac{10}{7}$ b. $y = \frac{5}{2}$ b. $y = 5$  2. If $\triangle ABC \cong \triangle DEF$ , $AB = 21$ feet, $m\angle B = 23^\circ$ , which of the following statements is false? (a) $AB = ED$ (b) $\angle C \cong \angle F$ (c) $CA = DF$ (d) $m\angle E = 124^\circ$																	

## Fundamentals of Geometry: 2- and 3-Dimensional Figures (Right Triangles)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
									I	E	M				
<b>District Objective</b> Simplify radical expressions.												<b>PASS Process Standard</b>		<b>Quarter II No. Days 4</b>	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will...													<b>NCTM Standard Pg. 354</b>		
<b>Text Correlation</b> 12.1, Pg. 347 12.2, Pg. 351 12.4, Pg. 358 12.5, Pg. 361					<b>Rating</b> 2			<b>Additional Resources</b> Simplifying Radicals Activity							
<b>Assessment</b>															

# Fundamentals of Geometry: Angles and Triangles

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I/M					
<b>District Objective</b> State and apply the Pythagorean Theorem and its converse.												<b>PASS Process Standard</b>		<b>Quarter II</b> <b>No. Days</b> 5	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will... <b>IV. Angles and Triangles</b> B. Use the Pythagorean Theorem and its converse to find missing side lengths and to determine acute, right, and obtuse triangles.												<b>NCTM Standard</b> Pg. 334			
<b>Text Correlation</b> 12.3, Pg. 353 12.4, Pg. 358 12.6, Pg. 364								<b>Rating</b> 2		<b>Additional Resources</b> FRG III: Right Triangles - Finding Area (Class Activity); Explore Pythagorean Theorem (Class Activity); Color Sheet # 34 (Worksheet); The Pythagorean Theorem (Worksheet); Geometry of Baseball (Project); Classroom Lesson: Pythagorean Theorem (Class Activity); Exploring the Pythagorean Theorem; Pythagorean Puzzle 1, 2 & 3; Activity 34; Tasmanian Devil-“The Hero”Activity					
<b>Assessment</b>  1. The lengths of the legs of a right triangle are 12 cm and 16 cm. The length of the hypotenuse is:  (a) 28 cm      (b) 18 cm      (c) $\sqrt{112}$ cm      (d) 20 cm  2. The hypotenuse of a right triangle is 17 in. long. One leg is 15 in. long. The length of the other leg is:  (a) 8 in.                      (b) 22.67 in.      (c) 127.5 in.      (d) 2 in.  3. $x =$															

## Fundamentals of Geometry: Angles and Triangles

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
										I/M							
<b>District Objective</b> Apply special properties of 45-45-90 and 30-60-90 triangles to find missing side lengths in right triangles.												<b>PASS Process Standard</b>		<b>Quarter II</b> <b>No. Days</b> 2			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... <b>IV. Angles and Triangles</b> A. Solve problems using properties of angles (e.g., interior, exterior, complementary, vertical, angle sums, <b>30-60-90</b> ).												<b>NCTM Standard</b> Pg. 334					
<b>Text Correlation</b> 12.7, Pg. 366								<b>Rating</b> 3		<b>Additional Resources</b> <u>Intro to Geometry</u> , Pg. 22; Geo War Activity							
<b>Assessment</b>  1. In a $30^\circ - 60^\circ - 90^\circ$ triangle, the ratio of the length of the hypotenuse to the length of the shorter side is ?  (a) $\sqrt{3}:1$ (b) $\sqrt{2}:1$ (c) $2:\sqrt{3}$ (d) 2:1  2. In a $45^\circ - 45^\circ - 90^\circ$ triangle, the ratio of the length of the hypotenuse to the length of a side is ?  (a) $\sqrt{3}:1$ (b) $\sqrt{2}:1$ (c) 1:1      (d) 2:1																	

# Fundamentals of Geometry: Angles and Triangles

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I	E	M			
<b>District Objective</b> State and apply the trigonometric ratios (tangent, sine, and cosine) to find missing parts of a right triangle.												<b>PASS Process Standard IV C</b>		<b>Quarter II</b> <b>No. Days</b> 6	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will... <b>IV. Angles and Triangles</b> C. Express the trigonometric functions as <b>ratios</b> and derive the relationship between <b>sine</b> , <b>cosine</b> , and <b>tangent ratios</b> , and use to solve real-world problems.												<b>NCTM Standard</b> Pg. 334			
<b>Text Correlation</b> 16.1, Pg. 485 16.2, Pg. 489 16.3, Pg. 494						<b>Rating</b> 3		<b>Additional Resources</b> FRG III: Right Triangles - Color Sheet # 40 (Worksheet); Logging Crew (Application Problem); Career Surveyor (Application Problem); Indirect Measurement (Outdoors Project); Modeling Math Activity (Outdoors Project); Activity 37 & 40							
<b>Assessment</b>  1. In the figure below, $\angle B$ is a right angle and other measures are marked. What is $\tan x$ ?  (a) $\frac{15}{8}$ (b) $\frac{8}{13}$ (c) $\frac{8}{17}$  (d) $\frac{15}{17}$ (e) $\frac{17}{13}$  2. From the time it takes a radar signal to bounce back from a plane, Air Traffic Control's radar can determine the distance, $d$ , of the plane from the radar dish. The angle, $a^\circ$ , that the plane makes with the horizontal, as shown below, can also be determined from the elevation of the plane above the level of the radar dish. Which of the following expressions gives this altitude?  *(a) $d \sin a^\circ$ (b) $d \cos a^\circ$ (c) $d \tan a^\circ$ (d) $d \cot a^\circ$ (e) $d \sec a^\circ$															

## Fundamentals of Geometry: 2- and 3-Dimensional Figures (Parallel Lines)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
							I			M					
<b>District Objective</b> Identify the following relationships of parallel lines with a transversal: corresponding angles, alternate interior angles, and alternate exterior angles.												<b>PASS Process Standard</b>		<b>Quarter III No. Days 3</b>	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> A. Deduce properties and relationships of figures from given assumptions and information to show: 1. Relationships of parallel lines with a transversal.													<b>NCTM Standard Pg. 342</b>		
<b>Text Correlation</b> 7.1, Pg. 185 7.2, Pg. 188 7.3, Pg. 193						<b>Rating</b> 2		<b>Additional Resources</b> FRG II: Triangles - Mira Activity (Class Activity); Parallel Lines and Angle Pairs (Class Activity - Notes); Paper Folding Activities; Lines, Transversals and Special Angle Pairs (Review Activity); Parallel Line and Angles Activity; Parallel Lines Cut by Transversal Activity							
<b>Assessment</b>  1. Use facts about lines to prove parallel lines exist.  2. Lines $m$ and $n$ below are parallel, and lines $x$ and $y$ are transversals. What is the value of $\alpha$ ?  (a) $60^\circ$ (b) $70^\circ$ (c) $80^\circ$ (d) $100^\circ$ (e) $110^\circ$															

## Fundamentals of Geometry: Angles and Triangles

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
							I			M							
<b>District Objective</b> Find the measure of angles in triangles.												<b>PASS Process Standard</b>		<b>Quarter III</b> <b>No. Days</b> 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will...												<b>NCTM Standard</b> Pgs. 308, 320					
<b>Text Correlation</b> 7.5, Pg. 201							<b>Rating</b> 3		<b>Additional Resources</b> FRG II: Triangles - Triangles and Angle Sums (Class Activity); Color Sheet 26 (Class Activity); Angles of a Triangle (Worksheet); Triangles on the Sphere (Class Activity); GeoWar (Review Worksheet); Angles of Triangles Activity; Angles of Special Triangles Activity								
<b>Assessment</b>  If one angle in a triangle measures $18^\circ$ and another measures $36^\circ$ , what is the measure of the third angle?  (a) $36^\circ$ (b) $46^\circ$ (c) $54^\circ$ *(d) $126^\circ$ (e) $144^\circ$																	

# Fundamentals of Geometry: 2- and 3-Dimensional Figures (Triangles)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
							I			M							
<b>District Objective</b> Classify, identify, and use an exterior angle to find the measure of interior angles.												<b>PASS Process Standard</b> II C		<b>Quarter III</b> <b>No. Days</b> 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> A. Deduce properties and relationships of figures from given assumptions and information to show: 2. Relationships between pairs of angles (e.g., adjacent, complementary, vertical).												<b>NCTM Standard</b> Pg. 342					
<b>Text Correlation</b> 7.6, Pg. 206						<b>Rating</b> 2		<b>Additional Resources</b> FRG II: Triangles - Triangles and Their Exterior Angles (Class Activity)									
<b>Assessment</b>  1. $m\angle 1 = ?$ <div style="text-align: center; margin-top: 20px;"> <span style="margin-right: 100px;">(a) <math>134^\circ</math></span> <span style="margin-right: 100px;">(b) <math>107^\circ</math></span> <span style="margin-right: 100px;">(c) <math>119^\circ</math></span> <span>(d) <math>46^\circ</math></span> </div>																	

## Fundamentals of Geometry: 2- and 3-Dimensional Figures (Triangles)

K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal		
										I/M							
<b>District Objective</b> Use diagonals of a polygon to determine the sum of the interior angles.												<b>PASS Process Standard</b>		<b>Quarter III</b> <b>No. Days</b> 2			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will...													<b>NCTM Standard</b> Pgs. 308, 320				
<b>Text Correlation</b> 7.7, Pg. 210							<b>Rating</b> 3		<b>Additional Resources</b> FRG II: Triangles - Discovering Formulas for Polygon Angles (Class Activity); Angles of Polygons Activity; Activity 25								
<b>Assessment</b>  For each of the figures below, $S$ represents the sum of the measures of the interior angles. Study the given information, then find $S$ for a fourteen - sided polygon.																	
3 sides 1 triangle $S = 180^\circ$				4 sides 2 triangles $S = 360^\circ$				6 sides 4 triangles $S = 720^\circ$									
(a) $2340^\circ$				(b) $2520^\circ$				(c) $2160^\circ$				(d) $1980^\circ$					

# Fundamentals of Geometry: 2- and 3-Dimensional Figures (Triangles)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
										I/M							
<b>District Objective</b> Find the measures of the interior and exterior angles of a regular polygon.												<b>PASS Process Standard</b> V B		<b>Quarter III</b> <b>No. Days</b> 3			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will...													<b>NCTM Standard</b> Pg. 320				
<b>Text Correlation</b> 7.7, Pg. 210						<b>Rating</b> 3		<b>Additional Resources</b> FRG II: Triangles - Color Sheet 24 (Worksheet); Frame Problem (Challenge Question); Activity 24; Polygons Made Simple Activity; Exterior Angles Activity; Star in a Pentagon Activity									
<b>Assessment</b>  Find the measure of one of the interior angles of a regular polygon with five sides.  (a) $144^\circ$ (b) $72^\circ$ (c) $108^\circ$ (d) $36^\circ$																	

# Fundamentals of Geometry: 2- and 3-Dimensional Figures

## (Special Quadrilaterals)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I/M					
<b>District Objective</b> State and apply properties of parallelograms, rhombuses, rectangles, squares and trapezoids.												<b>PASS Process Standard</b>		<b>Quarter III</b> <b>No. Days</b> 8	
○ ITBS   ○ CRT   ○ EXPLORE   ○ EOI   ● PLAN   ● ACT   ○ AP															
<b>PASS Objective</b> The student will...												<b>NCTM Standard</b> Pgs. 308, 348			
<b>Text Correlation</b> 8.1, Pg. 221 8.2, Pg. 225 8.3, Pg. 229 8.4, Pg. 233								<b>Rating</b> 2		<b>Additional Resources</b> FRG III: Quadrilaterals - Crazy Eight (Class Activity); Parallelogram Properties (Class Activity); Parallelogram Puzzle (Challenge Problem); Rectangle Problem (Challenge Problem); How Many Squares (Challenge Problem); Square Perceptions (Group Activity); Trapezoids (Class Activity); Exploring Geometry (Individual Activity); Quadrilateral Check Off List (Worksheet - USE THIS!); Folding Polygons from Circles (GREAT Review Activity); Pop-Up Origami Book (Individual Project); Design a Dart Game (Individual Project); Diagonals of a Rhombus are Perpendicular (But Not Necessarily Equal) Activity					
<b>Assessment</b>															
1. $m\angle QRP = ?$															
(a) $90^\circ$ (b) $53^\circ$															
(c) $37^\circ$ (d) cannot be determined															
2. $QN = ?$															
(a) 6                              (b) 8															
(c) 12                            (d) 10															
3. A quadrilateral with exactly one pair of parallel sides is a															
(a) parallelogram      (b) rhombus      (c) trapezoid      (d) rectangle															
4. Judging by appearance, the figure is a															
(a) square															
(b) rhombus															
(c) trapezoid															
(d) parallelogram															

## Fundamentals of Geometry: Logical Reasoning (Similarity)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
							I	E	E	M							
<b>District Objective</b> Express a ratio in simplest form.												<b>PASS Process Standard</b> III D IV C		<b>Quarter III</b> <b>No. Days</b> 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... .												<b>NCTM Standard</b> Pg. 354					
<b>Text Correlation</b> 10.1, Pg. 295							<b>Rating</b> 1		<b>Additional Resources</b> FRG IV: Similarity - Body Parts/Human Ratios; The Golden Ratio Activity								
<b>Assessment</b>  Express the ratio in simplest form.																	
1. $\frac{12}{28}$																	
(a) $\frac{12}{28}$ (b) $\frac{4}{9}$																	
(c) $\frac{3}{7}$ (d) $\frac{1}{2}$																	
2. 3 ft. to 20 in.																	
(a) 5 to 9                              (b) 9 to 5																	
(c) 3 to 20                            (d) 3 to 5																	

# Fundamentals of Geometry: Logical Reasoning (Similarity)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
							I	E	E	M							
<b>District Objective</b> Identify, write, and solve proportions.												<b>PASS Process Standard</b> III D IV C		<b>Quarter III</b> <b>No. Days</b> 2			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will...												<b>NCTM Standard</b> Pg. 354					
<b>Text Correlation</b> 10.2, Pg. 298 (no writing)							<b>Rating</b> 3		<b>Additional Resources</b> FRG IV: Similarity - Ratio and Proportion (Worksheet); Using Photo Images to Bring Real World Situations Into Your Classroom Activity								
<b>Assessment</b>  1. Solve the proportion $\frac{6}{16} = \frac{9}{x}$ .  (a) $x = 24$ (b) $x = 20$ (c) $x = 3.375$ (d) $x = 18$  2. Solve the proportion $12:k = 10:5$ .  (a) $k = 8$ (b) $k = 30$ (c) $k = 18$ (d) $k = 25$																	

<b>Fundamentals of Geometry: Logical Reasoning (Similarity)</b>																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Sketch similar figures oriented in the same direction.												<b>PASS Process Standard</b> III D IV C		<b>Quarter III</b> <b>No. Days</b> 1		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ● PLAN ● ACT ○ AP																
<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> B. Determine and use the relationships of congruency and <b>similarity</b> to determine unknown values.														<b>NCTM Standard</b> Pg. 360		
<b>Text Correlation</b> 10.3, Pg. 301						<b>Rating</b> 2		<b>Additional Resources</b> Making an Enlargement Activity								
<b>Assessment</b>  Which figures are similar and oriented in the same direction?  (a) (b)  (c) (d)																

# Fundamentals of Geometry: Logical Reasoning (Similarity)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I/M					
<b>District Objective</b> Identify corresponding parts of similar triangles.												<b>PASS Process Standard</b> III D IV C		<b>Quarter III</b> <b>No. Days</b> 1	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will...												<b>NCTM Standard</b> Pg. 308			
<b>Text Correlation</b> 10.3, Pg. 301								<b>Rating</b> 3		<b>Additional Resources</b> Using Similar Polygon Properties to Test for Similarity Activity					
<b>Assessment</b>															
$\triangle JKL \sim \triangle MNP.$															
 $KL =$															
(a) 12                      (b) 14															
(c) 20                      (d) 15															
 $m\angle J =$															
(a) $66^\circ$ (b) $36^\circ$															
(c) $78^\circ$ (d) $54^\circ$															

<b>Fundamentals of Geometry: Logical Reasoning (Similarity)</b>																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Find missing measures of similar triangles.												<b>PASS Process Standard</b> III D IV C		<b>Quarter III</b> <b>No. Days</b> 3		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ● PLAN ● ACT ○ AP																
<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> B. Determine and use the relationships of congruency and <b>similarity</b> to determine unknown values.														<b>NCTM Standard</b> Pgs. 308, 320		
<b>Text Correlation</b> 10.4, Pg. 305					<b>Rating</b> 2			<b>Additional Resources</b> FRG IV: Similarity - Using Similar Triangles to Find Unknown Lengths (Outdoors Activity - adapt objects for your building); Finding the Unknown Height of Objects/Grading Rubric: Height Project Activity								
<b>Assessment</b>  1. If the lengths of the sides of one triangle are 8 inches, 10 inches, and 12 inches, respectively, what is the perimeter, in inches, of a similar triangle whose longest side is 4 inches?  (a) 90                      (b) 30                      (c) 15                      (d) 12                      *(e) 10																

## Fundamentals of Geometry: Logical Reasoning (Similarity)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Apply properties of similarity to other polygons.												<b>PASS Process Standard</b> III D IV C	<b>Quarter III</b> <b>No. Days</b> 2			
○ ITBS   ○ CRT   ○ EXPLORE   ○ EOI   ● PLAN   ● ACT   ○ AP																
<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> B. Determine and use the relationships of congruency and <b>similarity</b> to determine unknown values.												<b>NCTM Standard</b> Pg. 334				
<b>Text Correlation</b> 10.4, Pg. 305								<b>Rating</b> 2	<b>Additional Resources</b> FRG IV: Similarity - Dissection: 4 Easy Pieces (Introduction Activity); Scale Drawings Activity; Ratio Puzzles with Triangles Activity; Designer/(C.A.D.) Operator Activity							
<b>Assessment</b>  1. $ABCD \sim$ (a) $EFGH$ (b) $EHGF$ (b) $FGHE$ (d) $GHEF$  2. The side that corresponds to $\overline{EH}$ is: (a) $\overline{AB}$ (b) $\overline{BC}$ (c) $\overline{CD}$ (d) $\overline{AD}$  3. The angle that corresponds to $\angle D$ is: (a) $\angle A$ (b) $\angle F$ (c) $\angle E$ (d) $\angle G$																

<b>Fundamentals of Geometry: Logical Reasoning (Similarity)</b>																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Determine if two triangles are similar using AA, SAS, and SSS similarity postulates.												<b>PASS Process Standard</b> III D IV C		<b>Quarter III</b> <b>No. Days</b> 3		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ● PLAN ● ACT ○ AP																
<b>PASS Objective</b> The student will... <b>I. Logical Reasoning</b> B. Determine and use the relationships of congruency and <b>similarity</b> to determine unknown values.														<b>NCTM Standard</b> Pg. 342		
<b>Text Correlation</b> 11.1, Pg. 325 11.2, Pg. 321 11.3, Pg. 330						<b>Rating</b> 2		<b>Additional Resources</b> FRG IV: Similarity - Modeling Similar Triangles (Activity), Modeling Similar Polygons (Activity).								
<b>Assessment</b> Tell which postulate, if any, you could use to show that the triangles are similar.																
<p>1. (a) AA (b) SAS Similarity 3. (a) AA (b) SAS Similarity (c) SSS Similarity (d) none of these (c) SS Similarity (d) none of these</p> <p>2. (a) AA (b) SAS Similarity 4. (a) AA (b) SAS Similarity (c) SSS Similarity (d) none of these (c) SSS Similarity (d) none of these</p>																

## Fundamentals of Geometry: 2- and 3-Dimensional Figures (Circles)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
										I/M							
<b>District Objective</b> Investigate the properties of central angles, arcs, and inscribed angles.												<b>PASS Process Standard</b>		<b>Quarter III</b> <b>No. Days</b> 4			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> E. Find angle measures and arc measures related to circles.													<b>NCTM Standard</b> Pg. 308				
<b>Text Correlation</b> 2.1, Pg. 40 13.1, Pg. 381 13.2, Pg. 385					<b>Rating</b> 3			<b>Additional Resources</b> FRG IV: Circles - Circle Graphs (Application Worksheet); Circles, Symmetry and Fashion (Group Project); Circles Activity									
<b>Assessment</b>  1. In the circle below, diameters $\overline{AE}$ , $\overline{BF}$ , $\overline{CG}$ , and $\overline{DH}$ intersect at $P$ . The 4 angles marked have the same measure of $x^\circ$ . What is the measure of $\angle DPE$ ?  (a) $12\frac{1}{2}^\circ$ (b) $22\frac{1}{2}^\circ$ *(c) $45^\circ$ (d) $72^\circ$ (e) $90^\circ$																	

## Fundamentals of Geometry: 2- and 3-Dimensional Figures (Circles)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
										I/M							
<b>District Objective</b> Identify the following parts of a circle: center, radius, diameter, circumference, chord, central angle, arc, tangents, and secants.												<b>PASS Process Standard</b>		<b>Quarter III</b> <b>No. Days</b> 2			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will...													<b>NCTM Standard</b> Pg. 308				
<b>Text Correlation</b> 2.1, Pg. 39 13.1, Pg. 381 13.3, Pg. 388 13.4, Pg. 393					<b>Rating</b> 2 3 2		<b>Additional Resources</b> FRG IV: Circles - Circles-Paper Folding (Activity); Circles and Spheres (Crossword Puzzle); Range of Motion (Class Project); Geometry Constructions-B Activity; Circle Graphs Activity										
<b>Assessment</b>  <p>According to the diagram as shown, which of the following is a chord?</p> <p>(a) PF            (b) DE            (c) BD            (d) PD</p>																	

<b>Fundamentals of Geometry: 2- and 3-Dimensional Figures</b>																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Investigate inscribed and circumscribed polygons and circles.												<b>PASS Process Standard</b>		<b>Quarter III</b> <b>No. Days</b> 2		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ○ PLAN ○ ACT ○ AP																
<b>PASS Objective</b> The student will...														<b>NCTM Standard</b> Pg. 308		
<b>Text Correlation</b> 13.5, Pg. 397							<b>Rating</b> 2		<b>Additional Resources</b>							
<b>Assessment</b>																

<b>Fundamentals of Geometry: 2- and 3-Dimensional Figures</b>																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
										I/M						
<b>District Objective</b> Investigate angles formed by chords, tangents, and secants.												<b>PASS Process Standard</b>		<b>Quarter III</b> <b>No. Days</b> 2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input type="radio"/> AP																
<b>PASS Objective</b> The student will...												<b>NCTM Standard</b> Pg. 308				
<b>II. Properties of 2- and 3-Dimensional Figures</b> E. Find angle measures and arc measures related to circles.																
<b>Text Correlation</b> 13.6, Pg. 402						<b>Rating</b> 2		<b>Additional Resources</b> <u>Intro to Geometry</u> , Pgs. 74-76								
<b>Assessment</b>																

## Fundamentals of Geometry: 2- and 3-Dimensional Figures (Area)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
								I		M							
<b>District Objective</b> Find the area and perimeter of irregularly shaped regions.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 1			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will...												<b>NCTM Standard</b> Pg. 320					
<b>Text Correlation</b> 9.1, Pg. 255								<b>Rating</b> 3		<b>Additional Resources</b> FRG III: Area - Color Sheet # 31 (Worksheet); Spotty Lab (Group Activity); Floor Plans Activity; Measuring Polygons Activity							
<b>Assessment</b>  1. How many feet long is the perimeter of the figure sketched below?  (a) 12 (b) 14 (c) 15 *(d) 16 (e) 18  2. What is the area of the above region: (a) 9 feet (b) 11 feet (c) 12 feet (d) 15 feet																	

# Fundamentals of Geometry: 2- and 3-Dimensional Figures (Area)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
							I	E	E	M					
<b>District Objective</b> State and apply the formulas for perimeter and area of special quadrilaterals.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 3	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> C. Compute length, perimeter/circumference, area, volume, and surface area of geometric objects with missing information and correctly identify the appropriate unit of measure of each.													<b>NCTM Standard</b> Pg. 320		
<b>Text Correlation</b> 9.3, Pg. 263 9.4, Pg. 267					<b>Rating</b> 2		<b>Additional Resources</b> FRG III: Area - Tangrams (Group Activity); Area of Squares (Class Notes); Tic Tac Toe: Measurement - Area: Dissection of Squares (Challenge Problem) and Color Sheet # 20 (Worksheet); A Carpet Dilemma (Challenge Problem); Worksheets on Area and Perimeter of Rectangles; Area: Tennis Court (Application), Color Sheet # 21 (Worksheet); Area of Parallelogram (Notes); Area of Parallelogram and Rectangle (Review Worksheet); Parallelograms Activity								
<b>Assessment</b>  1. The out - of - bounds lines around a basketball court in Central Park need to be repainted. The court is a rectangle 90 feet long and 50 feet wide. What is its perimeter, in feet:  (a) 140      (b) 190      (c) 230      (d) 280      (e) 4,500   2. The area of a parallelogram can be found by using the formula $A = bh$ , where $A$ is the area, $b$ is the length of the base, and $h$ is the height of the parallelogram. What is the area, in square inches, of $\triangle PQX$ if the area of parallelogram $PQRS$ is 28 square inches?  (a) 21      (b) 17.5      (c) 14      (d) 13      (e) 12															

<b>Fundamentals of Geometry: 2- and 3-Dimensional Figures</b> (Area)																
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal	
							I	E	E	M						
<b>District Objective</b> State and apply the formulas for the perimeter and area of triangles.												<b>PASS Process Standard</b> I B		<b>Quarter IV</b> <b>No. Days</b> 2		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ● PLAN ● ACT ○ AP																
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> C. Compute length, perimeter/circumference, area, volume, and surface area of geometric objects with missing information and correctly identify the appropriate unit of measure of each.														<b>NCTM Standard</b> Pg. 320		
<b>Text Correlation</b> 9.5, Pg. 271							<b>Rating</b> 2		<b>Additional Resources</b> FRG III: Area - Area of a Triangle (Class Activity); Worksheets; Color Sheet # 22 (Worksheet)							
<b>Assessment</b>  1. Find the area:  (a) 1,050 cm <sup>2</sup> (b) 525 cm <sup>2</sup> (c) 420 cm <sup>2</sup> (d) 840 cm <sup>2</sup>  2. A =  (a) 180 cm <sup>2</sup> (b) 90 cm <sup>2</sup> (c) 162 cm <sup>2</sup> (d) 81 cm <sup>2</sup>																

# Fundamentals of Geometry: 2- and 3-Dimensional Figures (Area)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
							I	E	E	M							
<b>District Objective</b> State and apply the formulas for circumference and area of a circle.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 3			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> C. Compute length, perimeter/circumference, area, volume, and surface area of geometric objects with missing information and correctly identify the appropriate unit of measure of each.												<b>NCTM Standard</b> Pg. 320					
<b>Text Correlation</b> 9.8, Pg. 282 9.9, Pg. 286						<b>Rating</b> 3		<b>Additional Resources</b> FRG III: Area - Circumference of a Circle: Discover $\pi$ (Group Activity); Color Sheet # 33 (Worksheet); Color Sheet # 32 (Worksheet); Tic Tac Toe Math # 42 (Worksheet); Area of Circular Regions (Application Worksheet); Assorted Worksheets; Pizza by the Slice (Class Activity); Bicycle Designer (Application Problem); <u>Intro to Geometry</u> : Pgs. 88-89									
<b>Assessment</b>  What is the area of a circle in the standard $(x, y)$ coordinate plane whose center is $(0, 0)$ and whose $x$ -intercepts are $(-3, 0)$ and $(3, 0)$ ?  (a) $3\pi$ (b) $6\pi$ *(c) $9\pi$ (d) $9\pi^2$ (e) $36\pi$																	

# Fundamentals of Geometry: 2- and 3-Dimensional Figures (Area)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
										I/M							
<b>District Objective</b> State and apply the formulas for the area and perimeter of trapezoids.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 2			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will...													<b>NCTM Standard</b> Pg. 320				
<b>Text Correlation</b> 9.6, Pg. 275					<b>Rating</b> 2			<b>Additional Resources</b> FRG III: Area - Trapezoids (Notes); Area of Trapezoids (Worksheet); Areas of Triangles and Trapezoids (Worksheets); Tic Tac Toe Math (Review Worksheet); <u>Intro to Geometry</u> : Pg. 87									
<b>Assessment</b>  Find the area of the trapezoids.																	
1.								2.									
(a) 72 cm <sup>2</sup>				(b) 232 cm <sup>2</sup>				(c) 116 cm <sup>2</sup>				(d) 160 cm <sup>2</sup>					
(a) 60 in <sup>2</sup>				(b) 75 in <sup>2</sup>				(c) 90 in <sup>2</sup>				(d) 150 in <sup>2</sup>					

<b>Fundamentals of Geometry: 2- and 3-Dimensional Figures</b>															
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
							I	E	E	M					
<b>District Objective</b> Use perimeter/area/circumference to find missing measurements.											<b>PASS Process Standard</b> V A		<b>Quarter IV</b> <b>No. Days</b> 2		
○ ITBS ○ CRT ○ EXPLORE ○ EOI ● PLAN ● ACT ○ AP															
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> B. Use properties of 2- and 3-dimensional figures to determine unknown values (e.g., given the perimeter/circumference, find the area).													<b>NCTM Standard</b> Pg. 320		
<b>Text Correlation</b> 9.1, Pg. 255 Circles 9.8, 9.9				<b>Rating</b> 2		<b>Additional Resources</b> FRG III: Area - Area-When Might We Use It? (Application Worksheet); Pool Designer (Application Worksheet).									
<b>Assessment</b>  1. A piece of fabric measures 36 in. by 39 in. A triangular scarf with a height of 30 in. and a base of 26 in. is cut from the fabric. How much is left over?  (a) 312 in. <sup>2</sup> (b) 2028 in. <sup>2</sup> (c) 624 in. <sup>2</sup> (d) 1014 in. <sup>2</sup>  2. The out - of - bounds lines around a basketball court in Central Park need to be repainted. The court is a rectangle 90 feet long and the area is 4500 square feet. What is its perimeter, in feet?  (a) 140      (b) 190      (c) 230      *(d) 280      (e) 4,500															

# Fundamentals of Geometry: 2- and 3-Dimensional Figures (Volume)

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal		
										I/M							
<b>District Objective</b> Demonstrate the volume of prisms and cylinders as the product of the area of the base times the height.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 6			
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input type="radio"/> PLAN <input type="radio"/> ACT <input type="radio"/> AP																	
<b>PASS Objective</b> The student will... <b>II. Properties of 2-and 3-Dimensional Figures</b> C. Compute length, perimeter/circumference, area, volume, and surface area of geometric objects with missing information and correctly identify the appropriate unit of measure of each.												<b>NCTM Standard</b> Pg. 320					
<b>Text Correlation</b> 14.4, Pg. 434 15.2, Pg. 456				<b>Rating</b> 3 2		<b>Additional Resources</b> FRG IV: Volume - Exploration: Volume (Class Activity); Volume of a Prism (Class Activity); Popcorn Activity (Group Activity); What Size Can? (Group Activity); Tic Tac Toe Math # 43 (Worksheet); Color Sheet # 28 (Worksheet); Trash Into Treasure (Project); Play Ball (Project); <u>Intro to Geometry</u> : Pgs. 93 & 95											
<b>Assessment</b>  1. The volume of a triangular prism with a height of 7 in. is $42 \text{ in.}^3$ . The area of a base is: (a) $294 \text{ in.}^2$ (b) $49 \text{ in.}^2$ (c) $6 \text{ in.}^2$ (d) $35 \text{ in.}^2$  2. The volume of a prism is $432 \text{ cm}^3$ . The area of a base is $144 \text{ cm}^2$ . Height = (a) 6 cm      (b) 3 cm      (c) 2 cm      (d) 12 cm																	



## Fundamentals of Geometry: Coordinate Geometry

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I	M				
<b>District Objective</b> Specify points in the coordinate plane by means of their coordinates.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will...												<b>NCTM Standard</b> Pg. 308			
<b>Text Correlation</b> 17.1, Pg. 507				<b>Rating</b> 2		<b>Additional Resources</b> FRG IV: Coordinate Geometry - Plot Your Initials (Individual Project); GeoBattleship (Game); I Have, Who Has (Game); <u>Intro to Geometry</u> : Pg. 61									
<b>Assessment</b>  1. The coordinates of P are: (a) (2, 3) (b) (2, -3) (c) (-3, 2) (d) (-2, -3)  2. The point with coordinates (0, 2) is: (a) A (b) B (c) C (d) D															

## Fundamentals of Geometry: Coordinate Geometry

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I	M				
<b>District Objective</b> Find the distance between two points.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 2	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will...														<b>NCTM Standard</b> Pg. 308	
<b>III. Coordinate Geometry</b> B. Use coordinate geometry to find: 1. Distance between two points.															
<b>Text Correlation</b> 17.2, Pg. 511					<b>Rating</b> 2			<b>Additional Resources</b> FRG IV: Coordinate Geometry - Taxi Cab Geometry (Application Worksheet); <u>Intro to Geometry</u> : Pg. 62							
<b>Assessment</b>															
1. Towns $A$ , $B$ , and $C$ are connected by the 2 straight highways shown below and can be located using the standard $(x, y)$ coordinate system shown (1 grid unit = 1 mile). How many miles is the trip from $A$ to $C$ along the highways through $B$ ?  (a) $4\sqrt{5}$ *(b) $4\sqrt{10}$ (c) $8\sqrt{5}$ (d) $20\sqrt{2}$ (e) 40															

## Fundamentals of Geometry: Coordinate Geometry

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I	M				
<b>District Objective</b> State and apply the midpoint formula.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 2	
○ ITBS   ○ CRT   ○ EXPLORE   ○ EOI   ● PLAN   ● ACT   ○ AP															
<b>PASS Objective</b> The student will...														<b>NCTM Standard</b> Pg. 308	
<b>III. Coordinate Geometry</b> B. Use coordinate geometry to find: 2. Midpoint of a segment.															
<b>Text Correlation</b> 17.2, Pg. 511					<b>Rating</b> 2			<b>Additional Resources</b> FRG IV: Coordinate Geometry - Distances and Midpoints (Worksheet); <u>Intro to Geometry</u> : Pg. 63							
<b>Assessment</b>															
1. The coordinates of the midpoint of the segment with endpoints $A(5, -8)$ and $B(-1, 4)$ are:  (a) $(4, -4)$ (b) $(-6, -12)$ (c) $\left(-\frac{3}{2}, \frac{3}{2}\right)$ (d) $(2, -2)$															

## Fundamentals of Geometry: Coordinate Geometry

K	1	2	3	4	5	6	7	Pre-Alg	Alg I	Geom	Alg II	MA	P & S	Pre-Cal	AP Cal
									I	M					
<b>District Objective</b> Find the slope of a line, given two points on the line.												<b>PASS Process Standard</b>	<b>Quarter IV</b> <b>No. Days</b> 2		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will...													<b>NCTM Standard</b> Pg. 308		
<b>III. Coordinate Geometry</b> B. Use coordinate geometry to find: 3. <b>Slopes</b> of parallel, perpendicular, horizontal, and vertical lines.															
<b>Text Correlation</b> 17.3, Pg. 515					<b>Rating</b> 2		<b>Additional Resources</b> FRG IV: Coordinate Geometry - Exploring Slope With GeoBoards (Class Activity); Slope of a Line (Worksheet); Introduction to Concept of Slope (Class Activity); <u>Intro to Geometry</u> : Pg. 64								
<b>Assessment</b>															
1. The coordinates of points $A$ and $B$ are shown in the standard $(x, y)$ coordinate plane below.															
What is the slope of $\overleftrightarrow{AB}$ ?															
(a) $-\frac{3}{4}$ (b) $\frac{2}{3}$ (c) $\frac{3}{2}$ *(d) $\frac{3}{4}$ (e) $\frac{4}{5}$															

# Fundamentals of Geometry: Coordinate Geometry

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
									I	M					
<b>District Objective</b> 1. Use slope to determine if lines are perpendicular or parallel. 2. Use slope to determine if lines are horizontal or vertical.												<b>PASS Process Standard</b>	<b>Quarter IV</b> <b>No. Days</b> 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will... <b>III. Coordinate Geometry</b> B. Use coordinate geometry to find: 3. <b>Slopes</b> of parallel, perpendicular, horizontal, and vertical lines.												<b>NCTM Standard</b> Pg. 308			
<b>Text Correlation</b> 17.4, Pg. 519							<b>Rating</b> 2	<b>Additional Resources</b> Placing a Parallelogram on a Coordinate Plane Activity							
<b>Assessment</b>  1. Line $k$ has slope $\frac{1}{5}$ . The slope of a line perpendicular to $k$ is:  (a) $\frac{1}{5}$ (b) 5                      (c) -5                      (d) $-\frac{1}{5}$  2. Line $k$ has slope 6. The slope of a line parallel to $k$ is:  (a) 6                      (b) -6                      (c) $\frac{1}{6}$ (d) $-\frac{1}{6}$															

## Fundamentals of Geometry: Coordinate Geometry

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
									I	M					
<b>District Objective</b> Use $y = mx + b$ form to state the slope and the $y$ -intercept and graph the line.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 3	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will...												<b>NCTM Standard</b> Pg. 308			
<b>Text Correlation</b> 17.5, Pg. 523				<b>Rating</b> 2		<b>Additional Resources</b> FRG IV: Coordinate Geometry - Graphing Linear Functions (Review Activity); <u>Intro to Geometry</u> : Pgs. 66-67									
<b>Assessment</b>  1. Find the slope and $y$ -intecept of the line $6x + 2y = 24$ .  (a) $m = 3, y = -12$ (b) $m = -12, y = \frac{1}{3}$ (c) $m = -3, y = 12$ (d) $m = 18, y = -\frac{1}{3}$															

## Fundamentals of Geometry: Coordinate Geometry

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
										I/M					
<b>District Objective</b> Given a set of points determine the type of figure based on its properties (e.g., parallelogram, isosceles triangle, regular octagon).												<b>PASS Process Standard</b>	<b>Quarter IV</b> <b>No. Days</b> 1		
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will... <b>III. Coordinate Geometry</b> C. Given a set of points determine the type of figure based on its properties (e.g., parallelogram, isosceles triangle, regular octagon).												<b>NCTM Standard</b> Pg. 308			
<b>Text Correlation</b> Pg. 528				<b>Rating</b> 3		<b>Additional Resources</b> Geometer's Sketchpad; <a href="http://aaamath.com/geo318-polygons-numbers.html">http://aaamath.com/geo318-polygons-numbers.html</a>									
<b>Assessment</b> 1. A rectangle in the standard $(x, y)$ coordinate plane has vertices at $(0, 0)$ , $(4, 0)$ and $(0, -2)$ . What are the coordinates of the fourth vertex? (a) $(-4, -2)$ (b) $(-4, 0)$ (c) $(0, 2)$ *(d) $(4, -2)$ (e) $(4, 2)$  2. In the standard $(x, y)$ coordinate plane, straight line segments are drawn between the following pairs of points:  <div style="margin-left: 150px;"> <math>(0, 0)</math> and <math>(2, 2)</math>  <math>(2, 2)</math> and <math>(4, 0)</math>  <math>(4, 0)</math> and <math>(2, 0)</math>  <math>(2, 0)</math> and <math>(0, 0)</math> </div> What shape is formed by these line segments: *(a) Triangle   (b) Square   (c) Trapezoid   (d) Pentagon   (e) Hexagon															

# Fundamentals of Geometry: Data Analysis, Statistics and Probability

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal
								I	E	E	E	E	M		
<b>District Objective</b> Determine the <b>probability</b> of an event involving “and”, “or”, and “not”.												<b>PASS Process Standard</b>		<b>Quarter IV No. Days 1</b>	
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP															
<b>PASS Objective</b> The student will... <b>V. Data Analysis, Statistics, and Probability</b> <b>C.</b> Determine the <b>probability</b> of an event involving “and”, “or”, or “not”.												<b>NCTM Standard Pg. 324</b>			
<b>Text Correlation</b>				<b>Rating</b> 3		<b>Additional Resources</b> Locker Measurement Activity									
<b>Assessment</b>  1. If the probability that an event will happen is $\frac{5}{8}$ , what is the probability that the event will NOT happen?  *(a) $\frac{3}{8}$ (b) $\frac{3}{5}$ (c) $\frac{5}{3}$ (d) $\frac{8}{5}$  (e) Cannot be determined from the given information  2. If a cube is tossed onto the $10 \times 10$ square, what is the probability of the cube landing: (a) on the circle? (b) on the rectangle? (c) on the circle or the rectangle? (d) on the circle and the rectangle? (e) neither the circle or the rectangle?															

## Fundamentals of Geometry: Data Analysis, Statistics and Probability

K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal				
										I	E	M							
<b>District Objective</b> Apply the Fundamental Counting Principle.												<b>PASS Process Standard</b>		<b>Quarter IV</b> <b>No. Days</b> 1/2					
<input type="radio"/> ITBS <input type="radio"/> CRT <input type="radio"/> EXPLORE <input type="radio"/> EOI <input checked="" type="radio"/> PLAN <input checked="" type="radio"/> ACT <input type="radio"/> AP																			
<b>PASS Objective</b> The student will... <b>V. Data Analysis, Statistics, and Probability</b> D. Use the Fundamental Counting Principle to solve problems (e.g., find the possible ways to label the vertices of a polygon).													<b>NCTM Standard</b> Pg. 324						
<b>Text Correlation</b>					<b>Rating</b> 3			<b>Additional Resources</b> Polygons (your Own Mind) Activity; Activity 25											
<b>Assessment</b>  Xavier and Yolanda have a total of 20 \$1 bills. All of the possible ways to divide the 20 bills between Xavier and Yolanda are graphed below. If Xavier must have an even number of \$1 bills, how many possible numbers of \$1 bills are there for Yolanda to have? (Note: Zero is an even number)																			
(a) 2				(b) 10				*(c) 11				(d) 20				(e) 21			



<b>Fundamentals of Geometry: Data Analysis, Statistics and Probability</b>																																						
K	1	2	3	4	5	6	7	Pre- Alg	Alg I	Geom	Alg II	MA	P & S	Pre- Cal	AP Cal																							
									I	E																												
<b>District Objective</b> Collect data involving two variables and display on a <b>scatter plot</b> ; interpret results using a linear or quadratic model.												<b>PASS Process Standard</b> IV A, D		<b>Quarter IV</b> <b>No. Days</b> 2																								
○ ITBS ○ CRT ○ EXPLORE ○ EOI ○ PLAN ○ ACT ○ AP																																						
<b>PASS Objective</b> The student will... <b>V. Data Analysis, Statistics, and Probability</b> A. Collect data involving two variables and display on a <b>scatter plot</b> ; interpret results using a linear or quadratic model/equation and identify whether the model/equation is a curve of best fit for the data (e.g., given a <b>scatter plot</b> and several linear or quadratic equations, which one is the best fit?).														<b>NCTM Standard</b> Pg. 324																								
<b>Text Correlation</b> Pg. 79 Pgs. 173-179					<b>Rating</b> 3			<b>Additional Resources</b> Height and Age Scatter Plot Activity																														
<b>Assessment</b>  1. Copy and complete the table. Angle 1 and Angle 2 are complementary angles. <table border="1" data-bbox="212 1304 1049 1400"> <tr> <td><math>m\angle 1</math></td> <td>1°</td> <td>10°</td> <td>20°</td> <td>30°</td> <td>40°</td> <td>50°</td> <td>60°</td> <td>70°</td> <td>80°</td> <td>89°</td> </tr> <tr> <td><math>m\angle 2</math></td> <td>?</td> <td>?</td> <td>?</td> <td>?</td> <td>?</td> <td>?</td> <td>?</td> <td>?</td> <td>?</td> <td>?</td> </tr> </table> 2. Construct a scatter plot for the data in the table. Let $x = m\angle 1$ and let $y = m\angle 2$ . Write an equation that relates $x$ and $y$ .																	$m\angle 1$	1°	10°	20°	30°	40°	50°	60°	70°	80°	89°	$m\angle 2$	?	?	?	?	?	?	?	?	?	?
$m\angle 1$	1°	10°	20°	30°	40°	50°	60°	70°	80°	89°																												
$m\angle 2$	?	?	?	?	?	?	?	?	?	?																												

