Integrated Math 2 2019-2010

Learning Plan: Chapter 1

Self Assessment Rubric			
1	**2**	**3**	**4**
I struggle a lot with this concept. Even if I'm shown an example, I can't follow the problem.	I struggle with this concept. I need an example or would need to ask for help.	I understand this problem and can solve it without help using my notes.	I understand this problem and can give an in-depth answer without help or notes.

Prerequisite Skills	Examples:
❑ **Solving multi-step algebraic equations**	❑ **2x - 15 = 16x - 8** ❑ **3 (x - 5) - 5 (x + 2) = 120**
❑ **Integer Operations**	❑ **-15 + 30 - (-23) - 14 (2 - 3)**

Learning Intentions	Notes/Examples
1. I can characterize polygons using reflection, rotation, or translation symmetry, and identify them by name. **Example Problems: 1-27, 1-29, 1-41, and CL 1-117(b)** **Math Notes: p. 7, p. 47** **Polygon Graphic Organizer** **Self-assessment**:	**Quadrilaterals**: ❑ Kite ❑ Trapezoid ❑ Isosceles Trapezoid ❑ Right Trapezoid ❑ Parallelogram ❑ Rhombus ❑ Rectangle ❑ Square
2. **I can rotate, reflect, and translate figures on a grid.** **Example problems: 1-62, 1-89, 1-102, 1-115, and CL 1-116(c)** **Math Notes p. 35** **Self-assessment**:	

Date			
Score			

Date			
Score			

3. **I can use area models to multiply polynomials and show area as a *product* (multiplication) and a *sum* (addition).**

Example problems: 1-78, 1-101, 1-114, and CL 1-121

Math Notes p. 41

Self-assessment:

Date			
Score			

4. **Identify angle pair relationships* including those created by parallel lines crossed by a transversal and solve problems using those relationships.**

Example Problems: 1-75, 1-77, 1-98, 1-99, 1-110, 1-113, CL 1-119, and CL 1-122.

Math Notes p. 58

Self-assessment:

Date			
Score			

***Angle pair relationships:**

- ❑ Complementary
- ❑ Supplementary
- ❑ Vertical
- ❑ Corresponding
- ❑ Alternate Interior
- ❑ Same Side Interior

5. **Prove the Triangle Angle Sum Theorem* and use it to solve problems.**

Example Problems: 1-75, 1-77, 1-98, 1-99, 1-110, 1-113, CL 1-119, and CL 1-122.

Self-assessment:

Date			
Score			

* **Triangle Angle Sum Theorem:** The sum of all interior angles of a triangle is 180˚.

Key Vocabulary

alternate interior angles
area model
conditional statement
congruent angles
conjecture
corresponding angles
linear pair of angles
equilateral
isosceles
parallel lines
polygon
perimeter
integer
proof
right angle
rigid transformations
same-side interior angles
scalene triangle
theorem
transversal
triangle
triangle inequality
venn diagram
vertex (vertices)
vertical angles

Learning Plan: Chapter 2 and Section 7.1

Self Assessment Rubric			
1	**2**	**3**	**4**
I struggle a lot with this concept. Even if I'm shown an example, I can't follow the problem.	I struggle with this concept. I need an example or would need to ask for help.	I understand this problem and can solve it without help using my notes.	I understand this problem and can give an in-depth answer without help or notes.

Prerequisite skills	Examples
❑ I can set up and solve a proportion.	$\frac{x+4}{5} = \frac{x+2}{3}$

Learning Intentions	Notes/Examples
1. I can identify pairs of triangles as congruent, write a congruence statement, and use flowcharts or two-column proofs. **Example Problems:** 2-6, 2-17, 2-28, 2-29, 2-31, 2-42, 2-54, 2-56, 2‑64(c), CL 2-120 and CL 2-128. **Math Notes: p. 74, p. 79** **Self-assessment**: **Date** | | | | **Score** | | | |	
2. I can dilate figures on the coordinate plane. **Example Problems:** 2-51, 2-61, 2-83(a), and CL 2-121**.** **Math Notes: p. 104** **Self-assessment**: **Date** | | | | **Score** | | | |	
3. I can identify pairs of triangles as similar using a triangle similarity condition**.**	

Example Problems: 2-78, 2-84, 2-94, 2-114, and CL 2-123.

Math Notes: p. 120

Self-assessment:

Date			
Score			

4. I can identify corresponding parts on similar figures and use corresponding side ratios to calculate missing side lengths on figures.

Example problems: 2-62, 2-82, 2-108, 2-117, and CL 2-122.

Math Notes: p. 113

Self-assessment:

Date			
Score			

Review Topics

Checkpoint #2:
5. I can calculate the area and perimeter of complex shapes.

Example Problems: 2-9, 2-18, 2-43, 2-53, 2-81, 2-107, and CL 2-129.

Checkpoint 2, p. 713-716

Self-assessment:

Date			
Score			

6. I can use a sequence of transformations to justify that polygons are similar or congruent.

Example Problems: 2-42(b), 2-62(c), 2-78, 2-86, 2-115, and CL 2-122(d)

Math Notes: p.35

Self-assessment:

Date			
Score			

7. I understand the larger angle is opposite the longer side in a triangle and can apply that information to solve problems.

Example Problems: 2-44, 2-88, 2-105, and CL 2-125

Self-assessment:

Date			
Score			

8. I can multiply binomials using an area model.

Example Problems: 2-55, 2-79, 2-106, 2-119, and CL 2-126.

Math Notes: p. 41

Self-assessment:

Date			
Score			

Key Vocabulary

AA~
SAS~
SSS~
ASA≅
AAS≅
SAS≅
SSS≅
HL ≅
scale factor
similar
corresponding sides
corresponding angles
congruent
flowchart
arrow diagram
2-column proof
isosceles

Learning Plan: Chapter 3 and 4.2

Self Assessment Rubric			
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Prerequisite skills	Examples
❑ **I can add, subtract, multiply, and divide fractions.**	❑ **¾ + ⅝ =** ❑ **⅔ - ⅝ =** ❑ **⅓ × ⅝ =** ❑ **⅓ ÷ ⅝ =**

Learning Intentions	Notes/Examples
1. I can use area and tree models to represent the sample space and use that model to calculate probability. **Example Problems:** 3-19, 3-30, 3-32, 3-59, 3-66, CL 3-119, and CL 3-120. **Math Notes: p. 164** **Self-assessment**:	
2. I can determine sample spaces and probabilities for the unions, intersections, and complements of events, and use the Addition Rule. **Example Problems:** 3-41, 3-55, 3-73, and CL 3-126. **Math Notes: p. 171** **Self-assessment**:	

Date			
Score			

Date			
Score			

3. I can calculate expected value and determine if a game is fair.

Example problems: 3-61, 3-84, 3-108, and CL 3-122.

Math Notes: p. 178

Self-assessment:

Date			
Score			

4. I can use flowcharts, two-column proofs and sequences of transformations to prove similarity and congruence.

Example Problems: 3-10, 3-33, 3-58, 3-74(d), 3-95, 3-115, and CL 3-121.

Math Notes: p. 74, p. 79, p. 120

Self-assessment:

Date			
Score			

Review Topics

5. I can multiply polynomials with or without a given area model.

Example Problems: 3-21, 3-44, 3-56(a) and (b), 3-75, 3-96, and CL 3-129.

Math Notes: p. 41

Self-assessment:

Date			
Score			

6. I can solve for the missing side lengths of right triangles using sine, cosine, and tangent.

Example Problems: 3-83, 3-105, and CL 3-125, 4-62, 4-63, 4-72, 4-73, 4-95, and CL 4-102.

Math Notes: p. 113

Self-assessment:

Date			
Score			

CHECKPOINT #3

7. I understand and apply angle relationships in geometric figures.

Example Problems: 3-7, 3-45, 3-63, 3-86, 3-109, CL 3-127, and CL 3-128.

Checkpoint 3: p. 717-721

Self-assessment:

Date			
Score			

8. I can solve proportions using properties of similar figures.

Example Problems: 4-22, 4-30, 4-41, 4-42, 4-74, 4-86, and CL 4-103

Checkpoint 4: p. 722-724

Self-assessment:

Date			
Score			

Key Vocabulary

Addition Rule for probability
Complement of an event
event
independent events
probability
probability area model
union of two events
intersection of two event
theta (θ)
expected value
sample space
systematic list
tree diagram
clinometer
fair game
trigonometry
Δx(delta (Δ) x)
Δy (delta (Δ) y)
slope ratio
slope angle
adjacent leg
opposite leg
hypotenuse
right triangle
cosine ratio
sine ratio
tangent ratio
inverse cosine ($\cos^{-1}$)
inverse sine ($\sin^{-1}$)
inverse tangent ($\tan^{-1}$)

Learning Plan: Chapter 6

Self Assessment Rubric			
1	**2**	**3**	**4**
I struggle a lot with this concept. Even if I'm shown an example, I can't follow the problem.	I struggle with this concept. I need an example or would need to ask for help.	I understand this problem and can solve it without help using my notes.	I understand this problem and can give an in-depth answer without help or notes.

Prerequisite skills	**Examples**
❑ **Simplifying radicals (Math Notes pg. 284)**	❑ $\sqrt{48}$ $\sqrt{162}$ $\sqrt{75}$
Learning Intentions	**Notes/Examples**
1. Recognize and apply the side ratios in 30°- 60°- 90° triangles and 45°- 45°- 90° triangles. **Example Problems:** 6-6, 6-19(b) and (d), 6-33(d), 6-44, 6-56, and CL 6-109. **Math Notes: pg. 332** **Self-assessment**: **Date** | | | | **Score** | | | |	
2. Recognize the smallest Pythagorean Triples and use them as shortcuts to determine missing side lengths in other triangles. **Example Problems:** 6-19(a) and (c), 6-43, 6-63, and CL 6-110 **Math Notes: pg. 332** **Self-assessment**: **Date** | | | | **Score** | | | |	
Review Topics	

3. Determine the area and/or perimeter of a shape using your knowledge of trigonometry or special right triangles to calculate missing lengths. **Example problems:** 6-6, 6-44, 6-63, 6-91, and CL 6-114. **Math Notes:** **Self-assessment**: **Date** | | | | **Score** | | | |	
4. Solve for angle measures using the inverse functions of sine, cosine, and tangent, as in problems **Example Problems:** 4-84 **Math Notes: p. 245** **Self-assessment**: **Date** | | | | **Score** | | | |	

Key Vocabulary

$30° - 60° - 90°$ **triangle**
$45° - 45° - 90°$ **triangle**
Similar Figures (Triangles)
Special Right Triangles
Pythagorean Triple
Pythagorean Identity
Sine Ratio
Cosine Ratio
Tangent Ratio
Rational and Irrational numbers
Rationalizing the denominator