Notes	Chapter 07: Similar Polygons Unit 1: Ratio, Proportion, and Similarity Section 1: Ratio and Proportion	
<u>on your desk</u>	The ratio of a to b means a/b.	
	For example.	
<u>7.1</u>	the ratio of 4 to 6 (or 4:6) is $\frac{4}{6}$; the ratio of x to y (or x:y) is $\frac{x}{2}$	
<u>7.2</u>	o y	
7.3	A proportion is an equation that two ratios are equal.	
	For example,	
7.4	the proportion of a:b=c:d is same as $\frac{a}{b} = \frac{c}{d}$	
7.5	5 u	
<u>7.6</u>	Example $C < \frac{60}{10}$	
	1. See the diagram.	
	a. Find the ratio of AE to BE.	
	b. Find the ratio of the largest angle of triangle	
	ACE to the smallest angle of triangle DBE.	
	2. A rectangular field has a length of one kilometer $5x/$	
	and a width of 300 meters. Find the ratio of the $\int_{30^{\circ}}$ 60^{\circ}	$\overline{}$
	length to the width.	D
	3. A telephone pole 7 meters is divided into the	
	ratio of 3:2. Find the lengths.	1

Notes	Chapter 07: Similar Polygons Unit 1: Ratio, Proportion, and Similarity Section 1: Ratio and Proportion
<u>on your desk</u>	Practice
	ABCD is a parallelogram. Find each ratio. AB
<u>7.1</u>	1. AB:BC
<u>7.2</u>	2. BC:AD / /6
<u>7.3</u>	3. m∠A:m∠C
	4. AB:perimeter of ABCD D 10 C
7.4	
7.5	5-7: $x=2$ and $y=3$. Write each ratio in simplest form.
<u>7.6</u>	5. x to y
	6. 6x ² to 12xy
	7. $\frac{y-x}{x}$
	X
	Write each algebraic ratio in simplest form.
	8. $\frac{6a^2}{12abc}$
	9. $\frac{2(a-b)}{2a-2b}$
	5a - 5D
	2

Notes	Chapter 07: Similar Polygons Unit 1: Ratio, Proportion, and Similarity Section 2: Properties of Proportions
<u>on your desk</u>	Properties of Proportions
7 1	1. $\frac{a}{b} = \frac{c}{d}$ is equivalent to
<u>/.1</u>	c d c d d d d d
7 <u>.2</u> 7 <u>.3</u>	2. If $\frac{a}{b} = \frac{c}{d} = \frac{e}{f} = \cdots$, then $\frac{a+c+e+}{b+d+f+} = \frac{a}{b} = \cdots$
<u>7.4</u>	NOTE: a & d are called extremes and b & c are called means. 1a is called
7.5	the means-extremes multiplication property
<u>7.6</u>	Example Use the proportion $\frac{a}{b} = \frac{3}{5}$ to complete each statement. 1. $5a =$
	2. $\frac{5}{b} =$
	3. $\frac{a+b}{b} =$
	4. $\frac{5}{3} =$ 3

Notes	Chapter 07: Similar Polygons Unit 1: Ratio, Proportion, and Similarity Section 2: Properties of Proportions	
<u>on your desk</u>	Practice 1. If $\frac{x}{7} = \frac{4}{2}$, then 2x=	
<u>7.1</u>	1 2	
<u>7.2</u>	2	
<u>7-3</u>	2. If $2x=3y$, then $\frac{2}{3}=$	
7.4		
7.5	3. If $\frac{x}{7} = \frac{4}{7}$, then $\frac{x+7}{7} =$	
<u>7.6</u>	1 2 1	
	4. If $\frac{x}{3} = \frac{y-2}{2}$, then $\frac{x+3}{3} =$ In the figure, $\frac{AD}{DB} = \frac{CE}{EB}$	A
	5. If CE=2, EB=6, and AD=3, then DB=	
	6. If AB=10, DB=8, and CB=7.5, then EB=	C E B

Notes	Chapter 07: Similar Polygons Unit 1: Ratio, Proportion, and Similarity Section 3: Similar Polygons
<u>on your desk</u>	Two polygons are similar (denoted ~) if their vertices can be paired so that:
<u>7.1</u>	 Corresponding sides are in proportion.
<u>7.2</u>	
<u>7-3</u>	Let us say that polygon ABCDE ~ polygon PQRST P Q
7.4	
7.5	
<u>7.6</u>	
	From the definition of similar polygons, we have: (complete the list) (1) $\angle A \cong \angle P$, $\angle _ \cong \angle _ $, $\angle _ \cong \angle _ $, $\angle _ \cong \angle _ _$, and $\angle _ \cong \angle _ _$.
	(2) $\frac{PQ}{AB} = = = = = = = = = = = = = = = = =$

Notes	Chapter 07: Símílar Polygons Unit 1: Ratio, Proportion, and Similarity Section 3: Similar Polygons	
<u>on your desk</u>	Example	A B
	1. Quadrilateral ABCD ~ quadrilateral A'B'C'D'.	30
<u>7.1</u>	a. find their scale factor	22
<u>7.2</u>		DC
7 .3	b. the values of x, y, and z	A' <u>12</u> B'
7.4	c. the ratio of the perimeter	x/ E
7.5		
<u>7.6</u>		<i>y</i> 30 <i>c</i>
	2. Quadrilateral EFGH ~ quadrilateral E'F'G'H'	E 12 4
	a. find their scale factor	/1
		10
	b. the values of x, y, and z	y q
		~ × H'
	c. the ratio of the perimeter	- 2.5
		£ 3 G'
		F
		6

	Unit 1: Ratio, Proportion, and Similarity Section 3: Similar Polygons
<u>on your desk</u>	Practice
	1. Quadrilateral ABCD ~ quadrilateral EFGH.
<u>7.1</u>	a. m∠E= <i>E</i>
<u>7.2</u>	E E
7.3	b. m∠G=
<u>7.4</u>	c. m∠B=
7.5	
<u>7.6</u>	d. If m \angle D=110, then m \angle H= Π 1 \angle \Im
	A
	e. The scale factor is B
	t. EH= 2
	у. вс= D 4 С
	h AB-
	7
Notes	7 Chapter 07: Símílar Polygons Unit 2: Working with Simílar Triangles Section 4: A Postulate for Simílar Triangles
NØtes on your desk	7 Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition
NØtes on your desk	7 Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if,
NOTES on your desk 7.1	7 Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and
Notes on your desk 7.1 7.2	7 Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal.
Notes on your desk 7.1 7.2 7.3	7 Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal.
Notes on your desk 7.1 7.2 7.3	7 Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal.
Notes on your desk 7.1 7.2 7.3 7.4	7 Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal.
Notes on your desk 7.1 7.2 7.3 7.4 7.5	7 Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal.
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal. B A C X Z Z Z Z
<i>Notes</i> on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal. A = C = X = Z
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal. B A C X Z Z
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal. A C X Z Z
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal.
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal. B A C X Z Z
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal. A A C X Z Postulate 15 (AA Similarity Triangle)
<i>N⊘tes</i> on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Definition Two triangles are similar if and only if, 1. all corresponding angle of two triangles are congruent, and 2. all proportion of corresponding sides of triangle are equal. A A C X Z Postulate 15 (AA Similarity Triangle) If two angles of one triangle are congruent to two angles of another triangle,

INVUES	Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles	
<u>on your desk</u>	Example	. D
	1. Given: \overrightarrow{AC}	A
<u>7.1</u>	Prove: $\triangle AOC \sim \triangle BOD$.	
<u>7.2</u>	(Provide the reasons for each step.)	
<u>7.3</u>	1. ACIIBD	В
	 ∠A≅∠B; ∠C≅∠D 	C
7.4	3. ∆AOC~∆BOD	
7.5		
<u>7.6</u>		~
	2. Given: $\overrightarrow{AB} \perp \overrightarrow{BF}$; $\overrightarrow{RH} \perp \overrightarrow{AH}$; $\angle 1 \cong \angle 2$.	F
	Prove: HR · BF=BA · HA	R
	(Provide the reasons for each step.)	
	1. $\overrightarrow{AB} \perp \overrightarrow{BF}$; $\overrightarrow{RH} \perp \overrightarrow{AH}$; $\angle 1 \cong \angle 2$	1 H
	2. ∠RHA≅∠FBA	<u> </u>
	3. ∆RHA~∆ABF	2
	4. $\frac{HA}{BF} = \frac{HK}{BA}$	A B
	5. HR·BF=BA·HA	
		9
Notes	Chapter 07: Símílar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles	9
Notes on your desk	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice	9
Nøtes on your desk	Chapter 07: Símílar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar	9 Find the value of x.
Notes on your desk	Chapter 07: Símílar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not.	Find the value of x.
Notes on your desk 7.1 7.2	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1.	9 Find the value of x. 5.
Notes on your desk 7.1 7.2 7.3	Chapter 07: Símílar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1.	Find the value of x. 5.
Notes on your desk 7.1 7.2 7.3	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1.	Find the value of x. 5. $3 \xrightarrow{5} \pi$
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1.	Find the value of x. 5. $3 \xrightarrow{5} \frac{1}{2} \xrightarrow{5} \frac{1}{2} \xrightarrow{7} \frac{1}{2} 7$
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1.	Find the value of x. 5. 3 2 4 4 7 4 7 7 7 7 7 7 7 7
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1. 2.	Find the value of x. 5. 4 4 4 7 4 5 4 4 5 4 4 5 4 5 4 4 5 4 5 4 4 5 4 4 4 4 4 4 4 4
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1.	Find the value of x. 5. 3 4 4 4 4 4 4 4 4
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1. 2.	Find the value of x. 5. 3 4 4 4 4 4 4 4 4
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1. 2. 3.	Find the value of x. 5. 3 4 4 4 4 4 4 4 4
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1. 2.	Find the value of x. 5. A A A A A A C A A A A A A A A
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1. 2. 3.	Find the value of x. 5. 3 4 6. 4 4 4 4 4 4 5 4 4 4 4 4 4 4 4
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1. 2.	Find the value of x. 5. 6. A A C C C C C C C C C C C C C
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 4: A Postulate for Similar Triangles Practice Tell whether each triangles are similar or not. 1. 2. 3. 4	Find the value of x. 5. 2 4 4 4 4 4 4 4 4

Notes	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 5: Theorems for Similar Triangles
<u>on your desk</u>	Theorem 7.1 (SAS Similarity Theorem)
	If an angle of one triangle is congruent to an angle of another triangle and
<u>7.1</u>	the sides including those angles are in proportion, then the triangles are
<u>7.2</u>	similar. A D
<u>7.3</u>	
7.4	
7.5	
<u>7.6</u>	E F
	Theorem 7.2 (SSS Similarity Theorem)
	If the sides of two triangles are in proportion, then the triangles are similar.
	A D
Notes	Chapter 07: Símílar Polygons Unit 2: Working with Similar Triangles Section 5: Theorems for Similar Triangles
<u>on your desk</u>	Example
	1. The measures of the sides of \triangle ABC are 4.5. and 7.
7.1	and the measures of the sides of Δ XYZ are 16, 20,
7.2	and 28. Are the triangle similar? If so, justify. If
	not why not?

	1. The measures of the sides of Δ ABC are 4, 5, and 7,	
<u>7.1</u>	and the measures of the sides of \triangle XYZ are 16, 20,	
<u>7.2</u>	and 28. Are the triangle similar? If so, justify. If	
7 .3	not, why not?	
7.4		
7.5	2. In \triangle ABC, AB=2, AC=5, and BC=6. In \triangle XYZ,	Х
<u>7.6</u>	XY=2.5, YZ=2, and XZ=3. Is \triangle ABC ~ \triangle XYZ? If so,	\wedge
	justify. If not, why not?	
		P Q
	3. If $\triangle XYO \sim \triangle XZP$, does it follow that $\triangle XPO \sim \triangle XZY$?	$/\times$
		Y Z
		11
		1.

	Chapter 07: Sima Unit 2: Working with Section 5: Theorems f	ilar Polygons h Similar Triangles for Similar Triangles
<u>on your desk</u>	PRACTICE	-
	Name similar trianol	les and state the postulate or theorem that iustifies your
7.1	answer.	
7.2	1	4. If $\triangle ABC \sim \triangle DEF$, does the segment
7.3		AB correspond to the segment DE?
	D/ro	E
7.4	80°	Does the segment BC correspond
7.5	B C	C to segment EF?
<u>7.6</u>	2.	
	6/ 10	Does the segment BC correspond
	D	to segment EF?
	Ă	
	L	[⊥] 5. Given: $∠B \cong ∠DEC$
	3. 3 5	Prove: $\triangle ABC \sim \triangle DEC$
	E C 6 M	
	6	10
	0	$\beta \not $ $\beta \not $ 13
Notes	Chapter 07: Simi Unit 2: Working with Section 6: Proportion	ílar Polygons h Similar Triangles tal Lengths
NOTES on your desk	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triand	ílar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem)
Notes on your desk	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to o	ilar Polygons h Similar Triangles nal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then
Notes on your desk 7.1	Chapter 07: Sími Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those sides	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally.
Notes on your desk 7.1 7.2	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those sides Given: $\Delta RST; PQ $	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally.
Notes on your desk 7.1 7.2 7.3	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those sides Given: $\triangle RST$: \overrightarrow{PQ} Prove: $\frac{RP}{PT} = \frac{SQ}{OT}$	ilar Polygons h Similar Triangles nal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS P 1 3 A
Notes on your desk 7.1 7.2 7.3	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those sides Given: $\triangle RST$: \overrightarrow{PQ} Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS P 1 3 R
Notes on your desk 7.1 7.2 7.3 7.4	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those side: Given: $\triangle RST$; \overrightarrow{PQ} Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS
Notes on your desk 7.1 7.2 7.3 7.4 7.5	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those sides Given: $\triangle RST$: \overrightarrow{PQ} Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$ Statement	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS P 1 3 Reasons
<i>N⊘tes</i> on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those side: Given: $\triangle RST$; $\overrightarrow{PQ} $ Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$ Statement	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS ts Reasons
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those sides Given: ΔRST : \overrightarrow{PQ} Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$ Statement	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS P A C RS Reasons
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those side: Given: ΔRST ; $\overrightarrow{PQ} $ Prove: $\overrightarrow{RP} = \frac{SQ}{QT}$ Statement	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS ts Reasons
<i>N⊘tes</i> on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those sides Given: ΔRST : \overrightarrow{PQ} Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$ Statement	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS P A A C C C C C C C C C C C C C
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those side: Given: $\triangle RST$; $\overrightarrow{PQ} $ Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$ Statement	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS hts Reasons
<i>Notes</i> on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those sides Given: ΔRST : $\overrightarrow{PQ} $ Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$ Statement	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS P A A A A A A A A A A A A A
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those side: Given: $\triangle RST$; $\overrightarrow{PQ} $ Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$ Statement	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS A A C C C C C C C C C C C C C
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Simi Unit 2: Working with Section 6: Proportion Theorem 7.3 (Triang If a line parallel to on it divides those sides Given: $\triangle RST$; $\overrightarrow{PQ} $ Prove: $\frac{RP}{PT} = \frac{SQ}{QT}$ Statement	ilar Polygons h Similar Triangles hal Lengths gle Proportionality Theorem) ne side of a triangle intersects the other two sides, then s proportionally. RS RS Reasons

JUUUES	Unit 2: Working with Similar Triangles Section 6: Proportional Lengths	
<u>on your desk</u>	Corollary	
	If three parallel lines intersect two transve	ersals, then they divide the
7.1	transversals proportionally.	A/ \x
7.2	Given: $\overline{AX} \parallel \overline{BY} \parallel \overline{CZ}$	
7.3	Prove: $\frac{AB}{AB} = \frac{XY}{AB}$	BY
	BC YZ	
7.4		C Z
7.5		
<u>7.6</u>	Theorem 7.3 (Triangle Angle-Bisector The	eorem)
	If a ray bisects an angle of a triangle, ther	n it divides the opposite side into
	segments proportional to the other two si	ides.
	Given: $\triangle DEF$; DG bisects $\angle FDE$	F
	Prove: $\frac{GF}{GF} = \frac{DF}{DF}$	r
	GE DE	271 3/E
		No. P
•		15 VK
Notes	Chapter 07: Símílar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths	15 VK
Notes on your desk	Chapter 07: Símílar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice	B A
Nøtes on your desk	Chapter 07: Símílar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice	$\beta \longrightarrow A$
Notes on your desk 7.1	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. CD =	
Notes on your desk 7.1 7.2	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. CD = DA	$B \xrightarrow{A} D$
Notes on your desk 7.1 7.2 7.3	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. <u>CD</u> = DA	$B \xrightarrow{A} D$
Notes on your desk 7.1 7.2 7.3	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. <u>CD</u> = DA b. If CD=3, DA=6, and DE=3.5, the	$B \xrightarrow{A} D$
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. $CD = DA$ b. If CD=3, DA=6, and DE=3.5, then	$B \xrightarrow{A} D$ $A \xrightarrow{C} D$ $A \xrightarrow{C} D$
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. <u>CD</u> = <u>DA</u> b. If CD=3, DA=6, and DE=3.5, then	$B \xrightarrow{A} D$ $A \xrightarrow{E} D$ C
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. CD = DA b. If CD=3, DA=6, and DE=3.5, then c. If CB=12, EB=8, and CD=6, then	$B \xrightarrow{\qquad } A \xrightarrow{\qquad } C$ $A \xrightarrow{\qquad } C$ $A \xrightarrow{\qquad } C$ $A \xrightarrow{\qquad } C$ $A \xrightarrow{\qquad } C$
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. $CD = D$ b. If CD=3, DA=6, and DE=3.5, then c. If CB=12, EB=8, and CD=6, then	$B \xrightarrow{A} D$ $A \xrightarrow{E} D$ $A \xrightarrow{C} D$ $A \xrightarrow{C} D$ $A \xrightarrow{C} D$ $A \xrightarrow{C} D$
	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. CD = DA b. If CD=3, DA=6, and DE=3.5, then c. If CB=12, EB=8, and CD=6, then	$B \xrightarrow{A} D$ $A \xrightarrow{E} D$ $A \xrightarrow{C} D$
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. $CD = D$ DA b. If CD=3, DA=6, and DE=3.5, then c. If CB=12, EB=8, and CD=6, then 2.	$B \xrightarrow{A} D$ $A \xrightarrow{E} D$ $DA = _ _ _ _ \square$
Notes on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. CD = DA b. If CD=3, DA=6, and DE=3.5, then c. If CB=12, EB=8, and CD=6, then 2. a. If a=2, b=3, and c=5, then d=	$B \xrightarrow{A} D$ $A \xrightarrow{E} D$ $A \xrightarrow{E} D$ $A \xrightarrow{C} D$ $A \xrightarrow{C} D$ $A \xrightarrow{C} D$
<i>Notes</i> on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. $CD = D$ b. If CD=3, DA=6, and DE=3.5, then c. If CB=12, EB=8, and CD=6, then 2. a. If a=2, b=3, and c=5, then d=	$B \xrightarrow{A} D$ $A \xrightarrow{E} D$
on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. $CD = DA$ b. If CD=3, DA=6, and DE=3.5, then c. If CB=12, EB=8, and CD=6, then 2. a. If a=2, b=3, and c=5, then d=	$B \xrightarrow{K} A$ $E \xrightarrow{D} C$ $DA = _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ $
<i>Notes</i> on your desk 7.1 7.2 7.3 7.4 7.5 7.6	Chapter 07: Similar Polygons Unit 2: Working with Similar Triangles Section 6: Proportional Lengths Practice 1. a. $CD = D$ b. If CD=3, DA=6, and DE=3.5, then c. If CB=12, EB=8, and CD=6, then 2. a. If a=2, b=3, and c=5, then d= b. If a=4, b=8, c=5, then c+d=	$B \xrightarrow{A} D$ $A \xrightarrow{E} D$

Notes	Chapter 07: Similar Polygon Unit 2: Working with Similar Trian Section 6: Proportional Lengths	ns ngles	
<u>on your desk</u>	<u>Practice</u>		
7.1 7.2	1. True or false? a. $\frac{FA}{HA} = \frac{FB}{TB}$ b. $\frac{FT}{FA} = \frac{FB}{FA}$ d. $\frac{FA}{FH} = \frac{FT}{FB}$ e. $\frac{FH}{AB} = \frac{FH}{FT}$	c. $FH = HA$ f. $FA = AH$ f. $FB = AH$ FB = TB	A B H T
<u>7-3</u>	a. 중 중 b. 운 중		_
7.4	c. $a = c$ d. $b = a$		_
7.5	0		
<u>7.6</u>	Find the value of x.		
	12 24		
	4. ,x , , , , , , , , , , , , , , , , , ,	5.	$5 \times x$ 7×9
			1 17