

Name: _____

Chemistry & Math - Week 12/2-12/6

Monday	Tuesday	Wednesday	Thursday	Friday
<u>Chemistry</u> <i>Review packet</i> <u>Math</u> <i>Review packet</i> Team Time	<u>Chemistry</u> <i>Review packet</i> <u>Math</u> <i>Review packet</i>	<u>Chemistry</u> <i>Jeopardy</i> <u>Math</u> <i>Jeopardy</i> Half Day	<u>Chemistry</u> <i>Jeopardy</i> <i>Final review</i> <u>Math</u> <i>Jeopardy</i> <i>Final review</i>	<u>Chemistry</u> <i>Final Exam</i> <u>Math</u> <i>Final Exam</i>
Homework: Work on study guide Challenge projects due Friday	Homework: Work on study guide Challenge projects due Friday	Homework: Study guide due today Study for final Challenge projects due Friday	Homework: Study for final Finish weekly packet Challenge projects due Friday	Homework: Weekly packet due today Challenge projects due today

Name: _____

Periodic Table

hydrogen 1 H	lithium 3 Li	beryllium 4 Be																	helium 2 He																
1.0079	6.941	9.0122																	4.0026																
sodium 11 Na	potassium 19 K	magnesium 12 Mg	calcium 20 Ca													fluorine 9 F	oxygen 8 O	nitrogen 7 N	carbon 6 C	boron 5 B															
22.990	39.098	24.305	40.078													18.998	15.999	14.007	12.011	10.811															
rubidium 37 Rb	cesium 55 Cs	strontium 38 Sr	barium 56 Ba	57-70 *	89-102 **	francium 87 Fr	radium 88 Ra													iodine 53 I	tellurium 52 Te	antimony 51 Sb	tin 50 Sn	thallium 81 Tl	lead 82 Pb	bismuth 83 Bi	polonium 84 Po	astatine 85 At	radon 86 Rn						
85.468	132.91	87.62	137.33													126.90	127.60	121.76	118.71	114.82	118.71	207.2	208.98	209	210	222									
scandium 21 Sc	yttrium 39 Y	vanadium 23 V	niobium 41 Nb	niobium 41 Nb	vanadium 23 V	chromium 24 Cr	manganese 25 Mn	iron 26 Fe	cobalt 27 Co	nickel 28 Ni	copper 29 Cu	zinc 30 Zn	gallium 31 Ga	germanium 32 Ge	arsenic 33 As	selenium 34 Se	bromine 35 Br	krypton 36 Kr	rubidium 37 Rb	cesium 55 Cs	barium 56 Ba	lanthanum 57 La	cerium 58 Ce	praseodymium 59 Pr	neodymium 60 Nd	promethium 61 Pm	samarium 62 Sm	europium 63 Eu	gadolinium 64 Gd	terbium 65 Tb	dysprosium 66 Dy	holmium 67 Ho	erbium 68 Er	thulium 69 Tm	ytterbium 70 Yb
44.956	47.867	50.942	92.906	92.906	50.942	51.996	54.938	55.845	58.933	58.933	63.546	65.39	69.723	72.61	74.922	78.96	79.904	85.468	85.468	137.33	138.91	140.12	140.91	144.24	144.91	150.36	151.96	157.25	158.93	162.50	164.93	167.26	168.93	173.04	
niobium 41 Nb	niobium 41 Nb	vanadium 23 V	niobium 41 Nb	vanadium 23 V	chromium 24 Cr	manganese 25 Mn	iron 26 Fe	cobalt 27 Co	nickel 28 Ni	copper 29 Cu	zinc 30 Zn	gallium 31 Ga	germanium 32 Ge	arsenic 33 As	selenium 34 Se	bromine 35 Br	krypton 36 Kr	rubidium 37 Rb	cesium 55 Cs	barium 56 Ba	lanthanum 57 La	cerium 58 Ce	praseodymium 59 Pr	neodymium 60 Nd	promethium 61 Pm	samarium 62 Sm	europium 63 Eu	gadolinium 64 Gd	terbium 65 Tb	dysprosium 66 Dy	holmium 67 Ho	erbium 68 Er	thulium 69 Tm	ytterbium 70 Yb	
92.906	92.906	50.942	92.906	50.942	51.996	54.938	55.845	58.933	58.933	63.546	65.39	69.723	72.61	74.922	78.96	79.904	85.468	85.468	137.33	138.91	140.12	140.91	144.24	144.91	150.36	151.96	157.25	158.93	162.50	164.93	167.26	168.93	173.04		
niobium 41 Nb	niobium 41 Nb	vanadium 23 V	niobium 41 Nb	vanadium 23 V	chromium 24 Cr	manganese 25 Mn	iron 26 Fe	cobalt 27 Co	nickel 28 Ni	copper 29 Cu	zinc 30 Zn	gallium 31 Ga	germanium 32 Ge	arsenic 33 As	selenium 34 Se	bromine 35 Br	krypton 36 Kr	rubidium 37 Rb	cesium 55 Cs	barium 56 Ba	lanthanum 57 La	cerium 58 Ce	praseodymium 59 Pr	neodymium 60 Nd	promethium 61 Pm	samarium 62 Sm	europium 63 Eu	gadolinium 64 Gd	terbium 65 Tb	dysprosium 66 Dy	holmium 67 Ho	erbium 68 Er	thulium 69 Tm	ytterbium 70 Yb	
92.906	92.906	50.942	92.906	50.942	51.996	54.938	55.845	58.933	58.933	63.546	65.39	69.723	72.61	74.922	78.96	79.904	85.468	85.468	137.33	138.91	140.12	140.91	144.24	144.91	150.36	151.96	157.25	158.93	162.50	164.93	167.26	168.93	173.04		
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92.906	92.906	50.942	92.906	50.942	51.996	54.938	55.845	58.933	58.933	63.546	65.39	69.723	72.61	74.922	78.96	79.904	85.468	85.468	137.33	138.91	140.12	140.91	144.24	144.91	150.36	151.96	157.25	158.93	162.50	164.93	167.26	168.93	173.04		
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92.906	92.906	50.942	92.906	50.942	51.996	54.938	55.845	58.933	58.933	63.546	65.39	69.723	72.61	74.922	78.96	79.904	85.468	85.468	137.33	138.91	140.12	140.91	144.24	144.91	150.36	151.96	157.25	158.93	162.50	164.93	167.26	168.93	173.04		
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Names and Formulas of Ionic Compounds

Name: _____

Period: _____

Write the names AND the chemical symbols (formulas) for the chemical compounds formed by combining the positive cation from the left column with the corresponding negative anion from the top row.

	Cl^{-1}	O^{-2}	CO_3^{-2}	PO_4^{-3}	S^{-2}	NO_3^{-1}
Na^{+1}						
Mg^{+2}						
Ca^{+2}						
K^{+1}						
Fe^{+3}						
Fe^{+2}						
NH_4^{+1}						

Write the symbols for the ionic compounds formed by combining the positive cation from the left column with the corresponding negative anion from the top row.

	Chloride	Sulfate	Nitrate	Phosphate	Carbonate	Hydroxide	Bicarbonate
Barium							
Aluminum							
Sodium							
Hydrogen							
Lead(II)							
Mercury(II)							
Ammonium							

			ATOMS				IONS
			Alkali Metals				
	p ⁺	e ⁻	Electron Dot Diagram	Sym	p ⁺	e ⁻	Noble Gas Ion Mimics
Li	3	3		Li ⁺	3	2	He
Na							
K							
Rb							
			Alkaline Earth Metals				
Be							
Mg							
Ca							
Sr							
Ba							
			Halogens				
F							
Cl							
Br							
I							
			Misc				
O							
Al							
N							
S							
Ra							

Lewis Dot Structure Practice

Draw the Lewis dot structure for the molecule.

CCl_4	
C_2H_2	
C_2H_4	
HF	
CS_2	
H_2Se	
H_2S	
NI_3	
CH_4	
NaCl	
CaO	
NH_4NO_3	

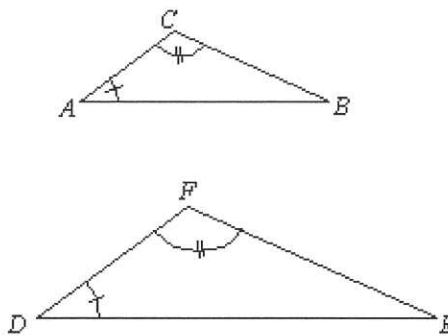
Name:

SIMILARITY NOTATION

i.) When solving for the length of George Washington's nose, you may have written a proportional equation like the one below. When solving proportional situations, it is very important that parts be labeled to help you follow your work.

$$\frac{\text{Length of George's Nose}}{\text{Length of George's Head}} = \frac{\text{Length of Student's Nose}}{\text{Length of Student's Head}}$$

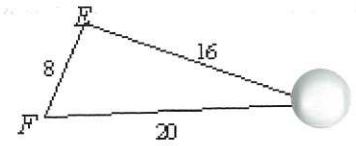
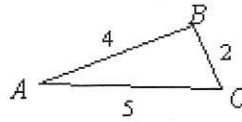
Likewise, when working with geometric shapes such as the similar triangles below, it is easier to explain which sides you are comparing by using notation that everyone understands.



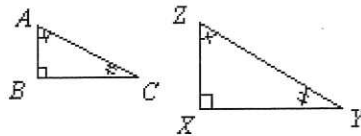
i.) One possible proportional equation for these triangles is $\frac{AC}{AB} = \frac{DF}{DE}$. Write at least three more proportional equations based on the similar triangles above.

b.) Jeb noticed that $m\angle A = m\angle D$ and $m\angle C = m\angle F$. But what about $m\angle B$ and $m\angle E$? Do these angles have the same measure? Or is there not enough information? **Justify** your conclusions.

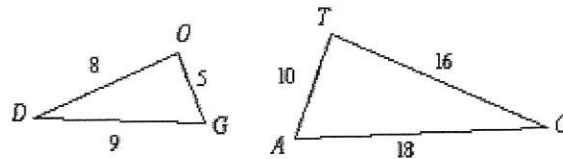
2.) To represent the fact that two shapes are **similar**, use the symbol " \sim ". For example, if the triangles shown to the right are similar, this can be stated as $\triangle ABC \sim \triangle DEF$. The order of the letters in the name of each triangle determines which sides and angles correspond. For example, in the statement $\triangle ABC \sim \triangle DEF$, you can determine that angle A corresponds to angle D and that side \overline{BC} corresponds to side \overline{EF} .



a.) Write a similarity statement for the following triangles. Can you have different statements for the same set of similar triangles?



b.) Then **examine** the two triangles shown. Which of the following statements are correctly written and which are not? Note that more than one statement may be correct.



a.) $\triangle DOG \sim \triangle CAT$

b.) $\triangle DOG \sim \triangle CTA$

c.) $\triangle OGD \sim \triangle ATC$

d.) $\triangle DGO \sim \triangle CAT$

The order of the letters in the name of each triangle determines which sides and angles correspond. For example, in the statement

$\triangle ABC : \triangle DEF$, you can determine that angle A

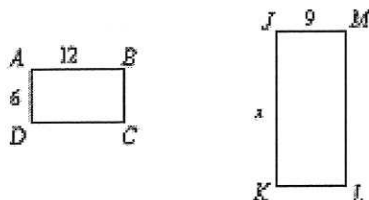
corresponds to angle D and that side \overline{BC} corresponds to side \overline{EF} .

Then **examine** the two triangles shown. Which of the following statements are correctly written and which are not? Note that more than one statement may be correct.

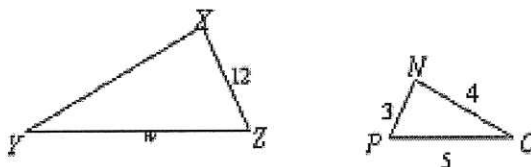
SIMILARITY NOTATION PRACTICE

1.) Find the value of the variable in each pair of similar figures shown. You may want to set up tables to help you write equations.

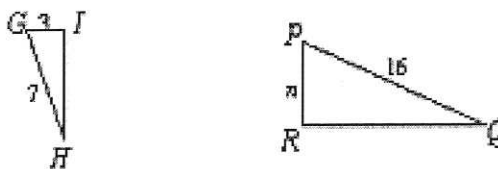
a.) $ABCD \sim JKLM$



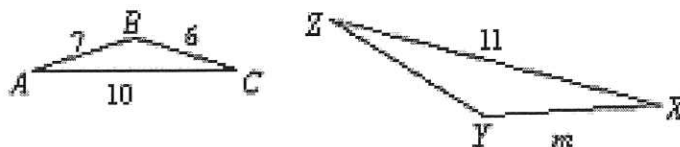
b.) $\triangle NOP \sim \triangle XYZ$



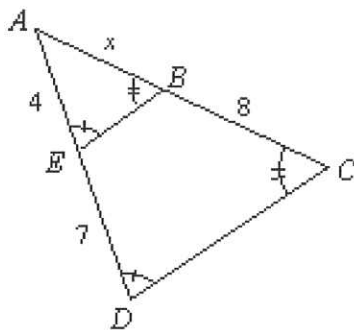
c.) $\triangle GHI \sim \triangle PQR$



d.) $\triangle ABC \sim \triangle XYZ$

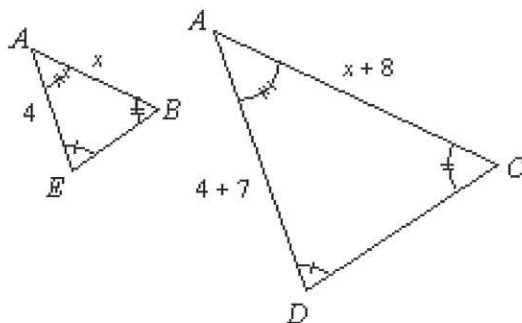


2.) Rochida is given the diagram shown and told that the two triangles are similar.



a.) Rochida knows that to be similar, all corresponding angles must be equal. Are all three sets of angles equal? How can you tell?

b.) Rochida decides to redraw the shape as two separate triangles, as shown. Write a proportional equation using the corresponding sides.



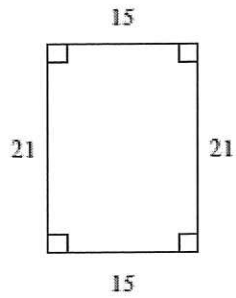
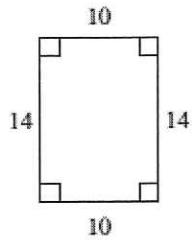
c.) Solve the equation for x . How long is \overline{AB} ? How long is \overline{AC} ?

PRACTICE WITH SIMILARITY AND PROPORTIONS

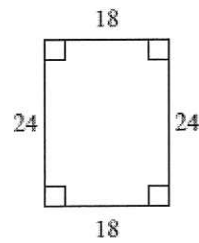
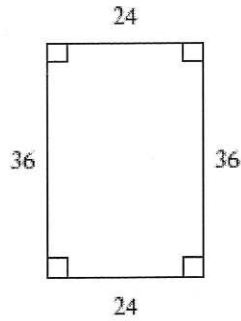
Part 1: Similar or Not?

Using proportions, state if the figures are similar or not.

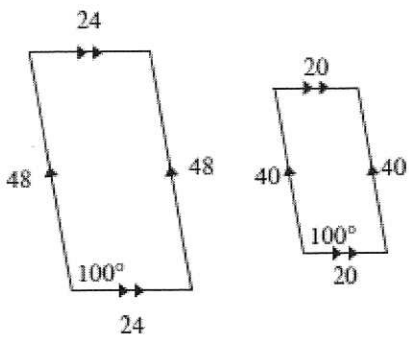
1)



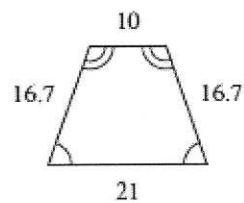
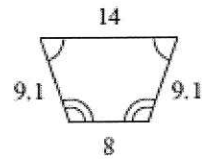
2)



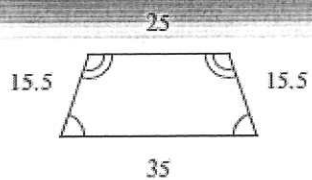
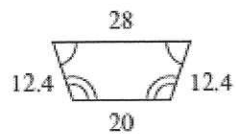
3.)



4.)



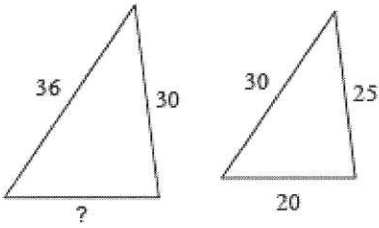
5.)



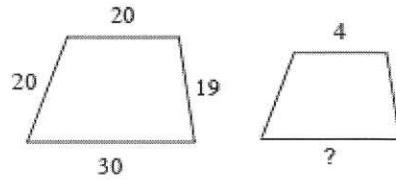
Part 2: Find the Missing Side Length

The polygons in each pair are similar. Find the missing side lengths using proportions.

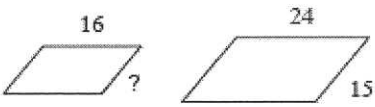
1)



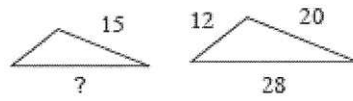
2)



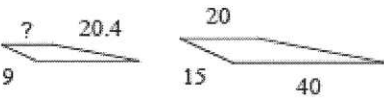
3)



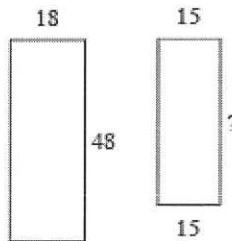
4)



5)



6)



Math 2

Name _____

Practice with Solving Proportions

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Date _____ Period _____

Solve each proportion.

1) $\frac{x}{3} = \frac{6}{2}$

2) $\frac{5}{7} = \frac{n}{3}$

3) $\frac{4}{p} = \frac{8}{3}$

4) $\frac{6}{4} = \frac{4}{m}$

5) $\frac{2}{n} = \frac{5}{4}$

6) $\frac{3}{5} = \frac{x}{4}$

7) $\frac{9}{10} = \frac{x}{4}$

8) $-\frac{3}{9} = -\frac{r}{12}$

9) $-\frac{9}{n} = -\frac{8}{11}$

10) $\frac{2}{v} = -\frac{9}{5}$

11) $\frac{9a}{2} = \frac{7}{9}$

12) $-\frac{8}{12} = \frac{5}{b}$

13) $\frac{9}{8} = \frac{k+6}{6}$

14) $\frac{2}{10} = \frac{4}{a-3}$

15) $\frac{10}{p+2} = \frac{4}{3}$

16) $\frac{4}{6} = \frac{8}{x-1}$

17) $\frac{m}{8} = \frac{m+7}{9}$

18) $\frac{n}{n+1} = \frac{3}{5}$