

Name: \_\_\_\_\_

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

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

Periodic Table

Name:

helium	<b>He</b>	4.0026	10	neon
2			10	
boron	<b>B</b>	10.811	11	fluorine
5			11	
carbon	<b>C</b>	12.011	12	oxygen
6			12	
nitrogen	<b>N</b>	14.007	13	oxygen
7			13	
phosphorus	<b>P</b>	15.999	14	sulfur
14			14	
silicon	<b>Si</b>	15.999	15	chlorine
12			15	
germanium	<b>Ge</b>	30.974	16	fluorine
32			16	
gallium	<b>Ga</b>	69.723	17	oxygen
31			17	
indium	<b>In</b>	113.77	18	chlorine
49			18	
cadmium	<b>Cd</b>	114.82	19	fluorine
48			19	
silver	<b>Ag</b>	107.87	20	oxygen
47			20	
rhodium	<b>Rh</b>	108.42	21	chlorine
45			21	
platinum	<b>Pt</b>	190.95	22	fluorine
78			22	
mercury	<b>Hg</b>	200.59	23	oxygen
80			23	
thallium	<b>Tl</b>	204.38	24	chlorine
81			24	
tin	<b>Sn</b>	118.71	25	fluorine
50			25	
antimony	<b>Sb</b>	121.76	26	oxygen
52			26	
tellurium	<b>Te</b>	127.60	27	chlorine
53			27	
iodine	<b>I</b>	126.90	28	fluorine
54			28	
strontium	<b>Ca</b>	131.29	29	oxygen
40			29	
barium	<b>Ba</b>	131.29	30	chlorine
56			30	
potassium	<b>K</b>	131.29	31	fluorine
39			31	
calcium	<b>Ca</b>	131.29	32	oxygen
40			32	
magnesium	<b>Mg</b>	131.29	33	chlorine
24			33	
chromium	<b>Cr</b>	131.29	34	fluorine
25			34	
iron	<b>Fe</b>	131.29	35	oxygen
26			35	
cobalt	<b>Co</b>	131.29	36	chlorine
27			36	
nickel	<b>Ni</b>	131.29	37	fluorine
28			37	
zinc	<b>Zn</b>	131.29	38	oxygen
30			38	
gallium	<b>Ga</b>	131.29	39	chlorine
31			39	
aluminum	<b>Al</b>	131.29	40	fluorine
13			40	
scandium	<b>Sc</b>	131.29	41	oxygen
22			41	
titanium	<b>Ti</b>	131.29	42	chlorine
23			42	
vaniadium	<b>V</b>	131.29	43	fluorine
24			43	
chromium	<b>Cr</b>	131.29	44	oxygen
25			44	
manganese	<b>Mn</b>	131.29	45	chlorine
26			45	
iron	<b>Fe</b>	131.29	46	fluorine
27			46	
nickel	<b>Ni</b>	131.29	47	oxygen
28			47	
cobalt	<b>Co</b>	131.29	48	chlorine
29			48	
rhodium	<b>Rh</b>	131.29	49	fluorine
30			49	
osmium	<b>Osm</b>	131.29	50	oxygen
31			50	
iridium	<b>Irid</b>	131.29	51	chlorine
32			51	
platinum	<b>Pt</b>	131.29	52	fluorine
33			52	
mercury	<b>Hg</b>	131.29	53	oxygen
34			53	
thallium	<b>Tl</b>	131.29	54	chlorine
35			54	
tin	<b>Sn</b>	131.29	55	fluorine
36			55	
antimony	<b>Sb</b>	131.29	56	oxygen
37			56	
tellurium	<b>Te</b>	131.29	57	chlorine
38			57	
iodine	<b>I</b>	131.29	58	fluorine
39			58	
strontium	<b>Ca</b>	131.29	59	oxygen
40			59	
barium	<b>Ba</b>	131.29	60	chlorine
41			60	
calcium	<b>Ca</b>	131.29	61	fluorine
42			61	
magnesium	<b>Mg</b>	131.29	62	oxygen
43			62	
chromium	<b>Cr</b>	131.29	63	chlorine
44			63	
iron	<b>Fe</b>	131.29	64	fluorine
45			64	
nickel	<b>Ni</b>	131.29	65	oxygen
46			65	
cobalt	<b>Co</b>	131.29	66	chlorine
47			66	
rhodium	<b>Rh</b>	131.29	67	fluorine
48			67	
osmium	<b>Osm</b>	131.29	68	oxygen
49			68	
iridium	<b>Irid</b>	131.29	69	chlorine
50			69	
platinum	<b>Pt</b>	131.29	70	fluorine
51			70	
mercury	<b>Hg</b>	131.29	71	oxygen
52			71	
thallium	<b>Tl</b>	131.29	72	chlorine
53			72	
tin	<b>Sn</b>	131.29	73	fluorine
54			73	
antimony	<b>Sb</b>	131.29	74	oxygen
55			74	
tellurium	<b>Te</b>	131.29	75	chlorine
56			75	
iodine	<b>I</b>	131.29	76	fluorine
57			76	
strontium	<b>Ca</b>	131.29	77	oxygen
58			77	
barium	<b>Ba</b>	131.29	78	chlorine
59			78	
calcium	<b>Ca</b>	131.29	79	fluorine
60			79	
magnesium	<b>Mg</b>	131.29	80	oxygen
61			80	
chromium	<b>Cr</b>	131.29	81	chlorine
62			81	
iron	<b>Fe</b>	131.29	82	fluorine
63			82	
nickel	<b>Ni</b>	131.29	83	oxygen
64			83	
cobalt	<b>Co</b>	131.29	84	chlorine
65			84	
rhodium	<b>Rh</b>	131.29	85	fluorine
66			85	
osmium	<b>Osm</b>	131.29	86	oxygen
67			86	
iridium	<b>Irid</b>	131.29	87	chlorine
68			87	
platinum	<b>Pt</b>	131.29	88	fluorine
69			88	
mercury	<b>Hg</b>	131.29	89	oxygen
70			89	
thallium	<b>Tl</b>	131.29	90	chlorine
71			90	
tin	<b>Sn</b>	131.29	91	fluorine
72			91	
antimony	<b>Sb</b>	131.29	92	oxygen
73			92	
tellurium	<b>Te</b>	131.29	93	chlorine
74			93	
iodine	<b>I</b>	131.29	94	fluorine
75			94	
strontium	<b>Ca</b>	131.29	95	oxygen
76			95	
barium	<b>Ba</b>	131.29	96	chlorine
77			96	
calcium	<b>Ca</b>	131.29	97	fluorine
78			97	
magnesium	<b>Mg</b>	131.29	98	oxygen
79			98	
chromium	<b>Cr</b>	131.29	99	chlorine
80			99	
iron	<b>Fe</b>	131.29	100	fluorine
81			100	
nickel	<b>Ni</b>	131.29	101	oxygen
82			101	
cobalt	<b>Co</b>	131.29	102	chlorine
83			102	
rhodium	<b>Rh</b>	131.29	103	fluorine
84			103	
osmium	<b>Osm</b>	131.29	104	oxygen
85			104	
iridium	<b>Irid</b>	131.29	105	chlorine
86			105	
platinum	<b>Pt</b>	131.29	106	fluorine
87			106	
mercury	<b>Hg</b>	131.29	107	oxygen
88			107	
thallium	<b>Tl</b>	131.29	108	chlorine
89			108	
tin	<b>Sn</b>	131.29	109	fluorine
90			109	
antimony	<b>Sb</b>	131.29	110	oxygen
91			110	
tellurium	<b>Te</b>	131.29	111	chlorine
92			111	
iodine	<b>I</b>	131.29	112	fluorine
93			112	
strontium	<b>Ca</b>	131.29	113	oxygen
94			113	
barium	<b>Ba</b>	131.29	114	chlorine
95			114	
calcium	<b>Ca</b>	131.29	115	fluorine
96			115	
magnesium	<b>Mg</b>	131.29	116	oxygen
97			116	
chromium	<b>Cr</b>	131.29	117	chlorine
98			117	
iron	<b>Fe</b>	131.29	118	fluorine
99			118	
nickel	<b>Ni</b>	131.29	119	oxygen
100			119	
cobalt	<b>Co</b>	131.29	120	chlorine
101			120	
rhodium	<b>Rh</b>	131.29	121	fluorine
102			121	
osmium	<b>Osm</b>	131.29	122	oxygen
103			122	
iridium	<b>Irid</b>	131.29	123	chlorine
104			123	
platinum	<b>Pt</b>	131.29	124	fluorine
105			124	
mercury	<b>Hg</b>	131.29	125	oxygen
106			125	
thallium	<b>Tl</b>	131.29	126	chlorine
107			126	
tin	<b>Sn</b>	131.29	127	fluorine
108			127	
antimony	<b>Sb</b>	131.29	128	oxygen
109			128	
tellurium	<b>Te</b>	131.29	129	chlorine
110			129	
iodine	<b>I</b>	131.29	130	fluorine
111			130	
strontium	<b>Ca</b>	131.29	131	oxygen
112			131	
barium	<b>Ba</b>	131.29	132	chlorine
113			132	
calcium	<b>Ca</b>	131.29	133	fluorine
114			133	
magnesium	<b>Mg</b>	131.29	134	oxygen
115			134	
chromium	<b>Cr</b>	131.29	135	chlorine
116			135	
iron	<b>Fe</b>	131.29	136	fluorine
117			136	
nickel	<b>Ni</b>	131.29	137	oxygen
118			137	
cobalt	<b>Co</b>	131.29	138	chlorine
119			138	
rhodium	<b>Rh</b>	131.29	139	fluorine
120			139	
osmium	<b>Osm</b>	131.29	140	oxygen
121			140	
iridium	<b>Irid</b>	131.29	141	chlorine
122			141	
platinum	<b>Pt</b>	131.29	142	fluorine
123			142	
mercury	<b>Hg</b>	131.29	143	oxygen
124			143	
thallium	<b>Tl</b>	131.29	144	chlorine
125			144	
tin	<b>Sn</b>	131.29	145	fluorine
126			145	
antimony	<b>Sb</b>	131.29	146	oxygen
127			146	
tellurium	<b>Te</b>	131.29	147	chlorine
128			147	
iodine	<b>I</b>	131.29	148	fluorine
129			148	
strontium	<b>Ca</b>	131.29	149	oxygen
130			149	
barium	<b>Ba</b>	131.29	150	chlorine
131			150	
calcium	<b>Ca</b>	131.29	151	fluorine
132			151	
magnesium	<b>Mg</b>	131.29	152	oxygen
133			152	
chromium	<b>Cr</b>	131.29	153	chlorine
134			153	
iron	<b>Fe</b>	131.29	154	fluorine
135			154	
nickel	<b>Ni</b>	131.29	155	oxygen
136			155	
cobalt	<b>Co</b>	131.29	156	chlorine
137			156	
rhodium	<b>Rh</b>	131.29	157	fluorine
138			157	
osmium	<b>Osm</b>	131.29	158	oxygen
139			158	
iridium	<b>Irid</b>	131.29	159	chlorine
140			159	
platinum	<b>Pt</b>	131.29	160	fluorine
141			160	
mercury	<b>Hg</b>	131.29	161	oxygen
142			161	
thallium	<b>Tl</b>	131.29	162	chlorine
143			162	
tin	<b>Sn</b>	131.29	163	fluorine
144			163	
antimony	<b>Sb</b>	131.29	164	oxygen
145			164	
tellurium	<b>Te</b>	131.29	165	chlorine
146			165	
iodine	<b>I</b>	131.29	166	flu

lanthanum	cerium	neodymium	praseodymium	europium	gadolinium	terbium	dysprosium	holmium	erbium	yterbium	ytterbium	173.04
La	Ce	Pr	Nd	Pm	Sm	Eu	Dy	Tb	Ho	Tm	168.93	
138.91	140.12	140.91	144.24	145.0	150.36	151.96	157.25	158.93	164.93	167.26	170.93	
actinium	thorium	protactinium	uraniium	neptuniun	plutoniun	americium	curium	berkelium	californium	einsteinium	fermiun	102.04
Ac	Th		U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	No
227.0	232.04		236.03	237.04	238.04	243.0	247.0	247.0	251.0	252.0	257.0	[259]

\* Lanthanide series

\*\*Actinide series

## 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.

	$\text{Cl}^{-1}$	$\text{O}^{-2}$	$\text{CO}_3^{-2}$	$\text{PO}_4^{-3}$	$\text{S}^{-2}$	$\text{NO}_3^{-1}$
$\text{Na}^{+1}$						
$\text{Mg}^{+2}$						
$\text{Ca}^{+2}$						
$\text{K}^{+1}$						
$\text{Fe}^{+3}$						
$\text{Fe}^{+2}$						
$\text{NH}_4^{+1}$						

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							

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

## Lewis Dot Structure Practice

Draw the Lewis dot structure for the molecule.

CCl <sub>4</sub>	
C <sub>2</sub> H <sub>2</sub>	
C <sub>2</sub> H <sub>4</sub>	
HF	
CS <sub>2</sub>	
H <sub>2</sub> Se	
H <sub>2</sub> S	
Nl <sub>3</sub>	
CH <sub>4</sub>	
NaCl	
CaO	
NH <sub>4</sub> NO <sub>3</sub>	

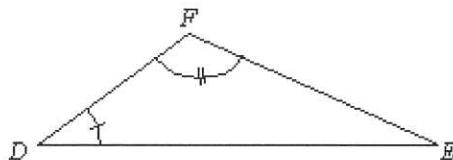
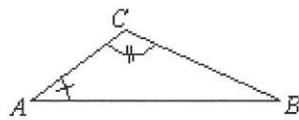
Name:

## SIMILARITY NOTATION

- a.) 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.

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

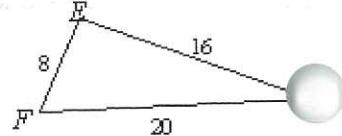
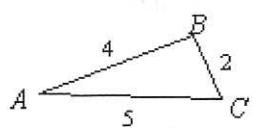
Likewise, when working with geometric shapes such as the similar triangles below, it is easier to explain which sides you are comparing by using notation that everyone understands.



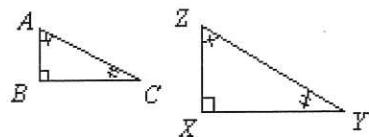
- a.) One possible proportional equation for these triangles is  $\frac{AC}{AB} = \frac{DF}{DE}$ . Write at least three more proportional equations based on the similar triangles above.

- 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.

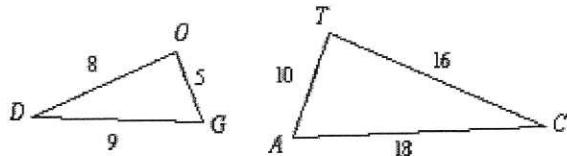
2.) To represent the fact that two shapes are **similar**, use the symbol “ $\sim$ ”. For example, if the triangles shown to the right are similar, this can be stated as  $\triangle ABC \sim \triangle DEF$ . The order of the letters in the name of each triangle determines which sides and angles correspond. 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.)  $\triangle DOG \sim \triangle ACTA$

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

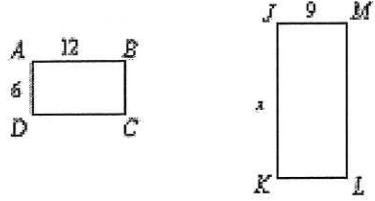
corresponds to angle D and that side  $\overline{BC}$  corresponds to side  $\overline{EF}$ .

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.

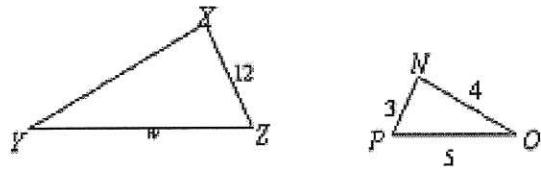
## SIMILARITY NOTATION PRACTICE

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.

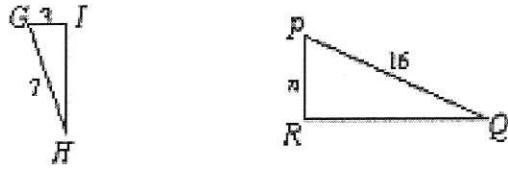
a.)  $ABCD \sim JKLM$



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



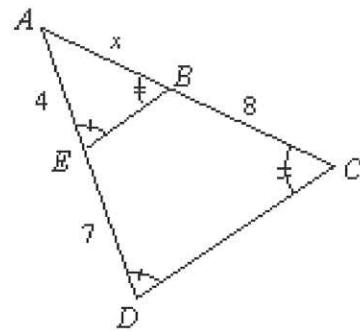
c.)  $\triangle GHI \sim \triangle PQR$



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

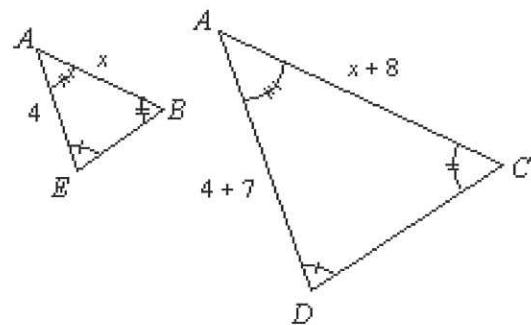


2.) Rochida is given the diagram shown and told that the two triangles are similar.



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.



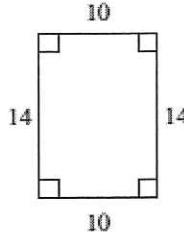
c.) Solve the equation for  $x$ . How long is  $\overline{AB}$ ? How long is  $\overline{AC}$ ?

## PRACTICE WITH SIMILARITY AND PROPORTIONS

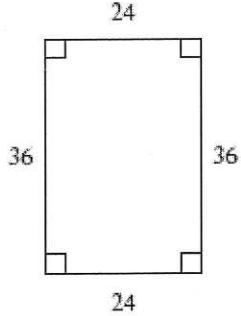
Part 1: Similar or Not?

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

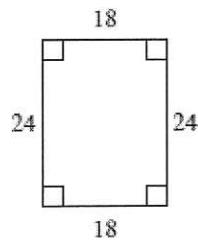
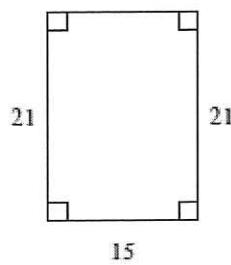
1)



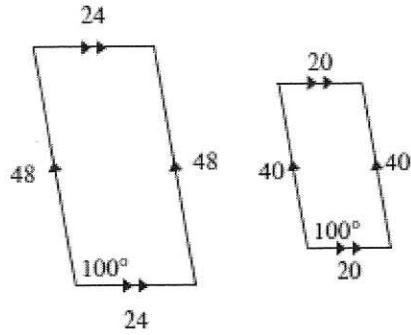
2)



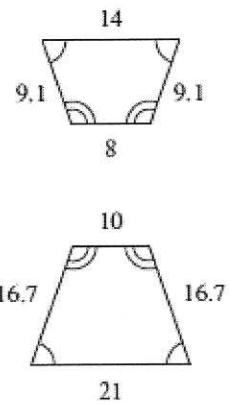
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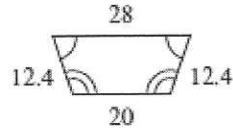
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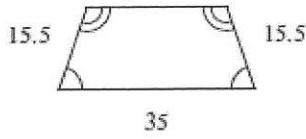
4.)



5.)



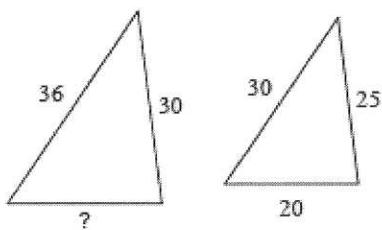
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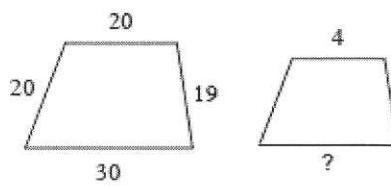
Part 2: Find the Missing Side Length

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

1)



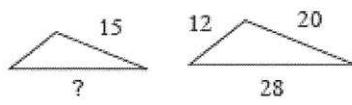
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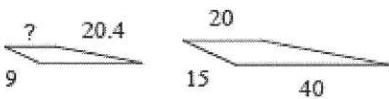
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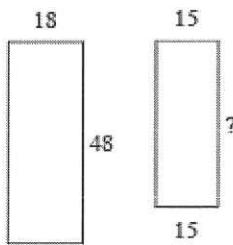
4)



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