**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_ Score:\_\_\_\_\_**

**U2 HWK # 2** *Parallel Lines and Transversals*

**Directions:** Use the diagram below to answer questions #1 and 2 given that $g∥h$. Mark the lines parallel.

1. For each of the following pairs of angles, describe the relationship between the two angles.

 $a. ∠3$ and $∠6$ b. $∠1$ and $∠8$ c. $∠4$ and $∠8$ d. $∠1$ and $∠5$

1. Using the figure above determine the measures of the remaining angles in the diagram. One angle measure is given. Show your work and justify how you know.
2. $m∠1=\\_\\_\\_\\_\\_\\_\\_\\_\\_$ b) $m∠2=\\_\\_\\_\\_\\_\\_\\_\\_\\_$ c) $m∠3=\\_\\_\\_\\_\\_\\_\\_\\_\\_$

 d) $m∠4=\\_\\_\\_\\_\\_\\_\\_\\_\\_$ e) $m∠5=\\_\\_\\_\\_\\_\\_\\_\\_\\_$ f) $m∠8=\\_\\_\\_\\_\\_\\_\\_\\_\\_$

 g) $m∠8=\\_\\_\\_\\_\\_\\_\\_\\_\\_$

1. ****One angle measure is given in the diagram. Determine the measures of the remaining angles in the diagram. Line j and line k are parallel. Show your work.

1. $m∠1=\\_\\_\\_\\_\\_\\_\\_$ b) $ m∠3=\\_\\_\\_\\_\\_\\_\\_$

 c) $m∠4=\\_\\_\\_\\_\\_\\_\\_$ d) $m∠5=\\_\\_\\_\\_\\_\\_\\_$

 e) $ m∠6=\\_\\_\\_\\_\\_\\_\\_$ f) $ m∠7=\\_\\_\\_\\_\\_\\_\\_$

 $g) m∠8=\\_\\_\\_\\_\\_\\_$

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| 1. Given line *v* $∥$ line *w*, solve for *x.*
 | 1. Given line $p∥$ line *q*, solve for *x.*

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| 1. Determine whether lines *s* and *t* are parallel. Provide a justification for your response.
 | 1. Determine whether lines *p* and *q* are parallel. Provide a justification for your response.
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| 1. Given: line $v∥$ line *w*.
	1. Which angle(s) are congruent to $∠1$?
	2. Which angle(s) are congruent to $∠8$?
	3. Name **three** pairs of supplementary angles.
 | 1. What value of *x* will make line *j* parallel to line *k*?
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