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

1st Quarter Graded Assignment

Proofs:

1. Given: <1 $≅$<4

 Prove: <2 $≅$<5

2.



3.

1. $X $is the midpoint of $\overbar{WY}$ 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. Definition of Midpoint

3. XY + YZ = XZ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. Substitution

4. Prove the **Triangle Sum Theorem**

**Given:** p//$l and m is a transversal of p and l$

**Prove:** $m<5+m<2+m<6=180$



5. Given: <1$≅$<2 and BC//AD

 Prove: <B$≅$<C



**Logic and Reasoning**

6. Draw a figure and make a conjecture given that ΔABC is a right triangle with <B as a right angle.

7. **Is the conjecture true or false, if it is false, find a counter example.**

**Given:** *XY*  *YZ*

**Conjecture:** *Y* is a midpoint of *XZ*.

8. Make a conjecture about the next term in this sequence: (find the next number in the sequence) circle your final answer.

5, 10, 20, 40,

9. Complete the truth table.

|  |  |  |  |
| --- | --- | --- | --- |
| **q** | **r** | **~q** | **~q ^ r** |
| **T** | **T** |  |  |
| **T** | **F** |  |  |
| **F** | **T** |  |  |
| **F** | **F** |  |  |

Directions: Show geometry and justify EVERY step. Circle your final answer!

10. Find the length of DE.



11. M is the midpoint of EK. Find the value of X and the length of EK.



12.





13.



Directions: Show all work! Circle your final answer!



14.g.



15.g.

16.g.

Directions: Show all work! Circle your final answer!

**17.** Find the distance between D(-5,6) and E(8,-4).

**18.** Find the coordinates of the midpoint of $\overbar{GH}$ for G(8,-6) and H(-14, 12)

**19.** Find the coordinates of G if P(-5,10) is the midpoint of $\overbar{EG}$ and E has coordinates (-8,6).

Directions: Use the figure to answer the following 4 questions.

20. Name a line that contains points B and F.

|  |  |
| --- | --- |
| a. $\overleftrightarrow{EB}$ | b. line *n* |
| c. $\overleftrightarrow{CB}$ | d. $\overleftrightarrow{CD}$ |

21. Name the point of intersection of line l and line n.

|  |  |
| --- | --- |
| a. E | b. B |
| c. C | d. D |

22. Name the 3 points which are collinear.

|  |  |
| --- | --- |
| a. A, B, F | b. D,C, A |
| c. E, D, F | d. E, D, C |

23. What is another CORRECT name for Plane T.

|  |  |
| --- | --- |
| a. Plane m, n, t | b. Plane t |
| c. Plane EDF | d. Plane ECD |

Please list any students you were working with on this assignment.