**2.6 Applications & Quiz Review Geometry**

**Directions: Match the vocabulary term to the definition or symbolic form.**

\_\_\_\_\_ 1) Line a) Two angles whose sum is 90ᴼ

\_\_\_\_\_ 2) Line Segment b)

\_\_\_\_\_ 3) Ray c) ᴼ

\_\_\_\_\_ 4) Straight Angle d) Two angles whose measures is the same

\_\_\_\_\_ 5) Supplementary Angles e) An angle whose measure is 180ᴼ

\_\_\_\_\_ 6) Linear Pair f)

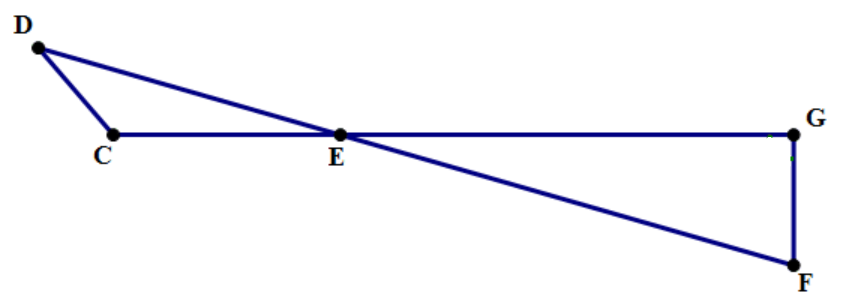
\_\_\_\_\_ 7) Complementary Angles g) Part of a ray or line with two endpoints

\_\_\_\_\_ 8) Congruent Angles h) Two angles whose nonadjacent sides form

opposite rays

**Directions: Use the picture below to determine if you are allowed to assume each statement. Write a YES or a NO as your answer.**

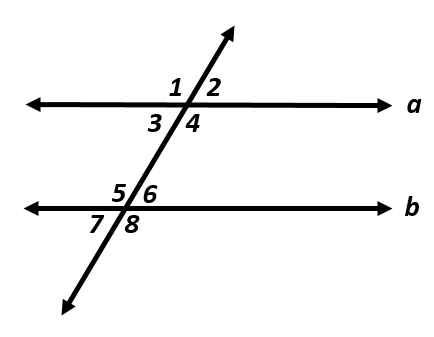
\_\_\_\_\_\_ 9) Points D, E, & F are collinear



\_\_\_\_\_\_ 10)

\_\_\_\_\_\_ 11) ∆GEF is a right triangle

\_\_\_\_\_\_ 12) is between C and G

**Directions: In the figure, ab. Answer each question.**

13) If m1 = (2x + 25) & m = (3x – 37), what is m?

14) If m = (6x2) and m = (14x2), what is m

15) If m = (–x + 60)ᴼ & m = (x2 + x – 20)ᴼ, what is m?

16) What is the angle relationship between 1 & 2? 17) What is the angle relationship between 7 & 2?

18) What is the angle relationship between 5 & 8? 19) What is the angle relationship between 3 & 5?

**Directions: Use the conditional statement “If two segments intersect at a angle, then the segments are perpendicular.” to find the converse, inverse, and contrapositive. Then find the truth value of each statement and write a biconditional statement if appropriate.**

20) T F Converse:

21) T F Inverse:

22) T F Contrapositive:

23) Biconditional:

24) What does the triangle sum theorem state?

25) What does the alternate interior angles theorem state?

26) What does the consecutive (same-side) exterior angles theorem state?

Draw a diagram the illustrates the following statements. Be sure to include the appropriate mathematical symbols and markings (i.e. right angles have a box symbol the corner).

|  |  |  |  |
| --- | --- | --- | --- |
| 27)  What statement can you make about your diagram using the definition of segment bisector? | 28)  What statement can you make about your diagram using the definition of linear pair? | 29)  What statement can you make about your diagram using the definition of midpoint? | 30)  **\*label the angles you just created with numbers 1-8**  What statement can you make about your diagram using corresponding angles theorem? |