

Answers Lesson 2-2

Pg 78

1. If 2 segments are congruent, they have the same length. (true)
Two segments have the same length iff they are congruent.
3. If a number is even, then it is divisible by 20. (false: 4)
5. In the U.S., if it is Independence Day, then it is July 4th. (true)
In the U.S. it is Independence Day iff it is July 4th.
7. If a line bisects a segment, it intersects only at the midpoint.
If a line intersects a segment, it bisects the segment
9. If you live in Washington DC, you live in the U.S. capital.
If you live in the U.S. capital, you live in Washington DC.
11. If 2 angles are congruent, then they have the same measure.
If 2 angles have the same measure, they are congruent.
13. A line, segment or ray is a perpendicular bisector of a segment iff it is perpendicular to the segment at its midpoint.

or A line, segment or ray is perpendicular to the segment at its midpoint iff it is a perpendicular bisector of a segment.
17. A point is a midpoint of a segment iff it divides the segment into two congruent segments.

or A point divides the segment into two congruent segments iff it is a midpoint of a segment.

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19. No; it is not reversible. Counter-example: a cat
21. No; it is not reversible. Counter-example: skew lines...
23. Good definition
27. Two angles are a linear pair iff they share a side, a vertex and are supplementary (measures add up to 180).
29. Yes; $\angle 1$ & $\angle 2$ share a side & vertex and are supplementary
31. No; $\angle 1$ & $\angle 2$ do not share a side & are not supplementary.
33. The converse is false. Counter-example: $x = -3$
35. $x^3 = 125$ iff $x = 5$.
41. Angles are congruent iff they have equal measures.
43. A number is a whole number iff it is a nonnegative integer
44. If $\angle A$ is an acute angle, then $\angle A$ has a measure between 0 and 90.
45. If $\angle A$ has a measure btwn 0 & 90, $\angle A$ is an acute angle
46. $\angle A$ is an acute angle iff $\angle A$ has a measure btwn 0 & 90.
or $\angle A$ has a measure btwn 0 & 90 iff $\angle A$ is an acute angle.