1.) Overlapping Segments Theorem

**NOT A VALID REASON IN PROOFS FOR TEST # 2**

**EX 1**

Given:

\[ AB = CD \]
\[ AB = 2x + 3 \]
\[ AC = 10x - 14 \]
\[ BD = 7x + 0.4 \]

Find:

\[ x = \_\_\_\_\_\_\_\_\_ \]

\[ CD = \_\_\_\_\_\_\_\_\_ \]

**EX 2**

\[ AC = BD \]
\[ AD = BE \]
\[ AE = 416 \]

Find: \[ BE = ? \]

\[ BC \text{ is } 1 \text{ more than twice } CD \]
2.) Overlapping Angles Theorem

NOT A VALID REASON IN PROOFS FOR TEST # 2

[ EX 1 ]

Find:
\[ x = \]
\[ m\angle AVB = \]

Given:
\[ m\angle AVB = m\angle CVD \]
\[ m\angle AVC = 5x + 73 \]
\[ m\angle BVD = 10x + 83 \]
\[ m\angle AVD = x + 33 \]

[ EX 2 ]

\[ m\angle AVD = m\angle BVE \]
\[ m\angle BVC = m\angle CVE \]
\[ m\angle AVC = ? \]
\[ m\angle AVE = 88 \]
\[ m\angle CVD \text{ is two less than double } m\angle AVB \]