Question 21019

 $tan^{2}(4) - sec^{2}(4) =$ Answer.-1. B is the midpoint of line AC. AB = 5x and BC = 2x + 3. Find AB, BC, and AC. Solution.

Since

$$sec^{2}(x) = \frac{1}{cos^{2}(4)}$$
, then using the equality $cos^{2}(4) + sin^{2}(4) = 1$, we get
 $sec^{2}(4) = \frac{cos^{2}(4) + sin^{2}(4)}{cos^{2}(4)} = 1 + tan^{2}(4).$
Finally,
 $tan^{2}(4) - sec^{2}(4) = tan^{2}(4) - (1 + tan^{2}(4)) = -1$

Answer. -1.

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