Quiz 5 MTH 427/527 Fall 2024

Sunday, September 8, 2024 6:01 PM

Prove $|a-b| \geq 0$

Proof: If $a-b \geq 0$, then by definition of absolute value and asumption

$$|a-b| = a-b \geq 0.$$

If $a-b<0$, then $a<b$ and so $0<b-a$. Thus,

$$|a-b| = -(a-b) = b-a > 0,$$

completing the proof. ∎