(c) $\Rightarrow \langle +|-\rangle = 0$

$$\left(\frac{1}{\sqrt{2}}\langle 0| + \frac{1}{\sqrt{2}}\langle 1|\right)\left(\frac{1}{\sqrt{2}}|0\rangle - \frac{1}{\sqrt{2}}|1\rangle\right)$$

$$\frac{1}{2} + (-0) + 0 - \frac{1}{2}$$

$$\frac{1}{2} - 0 + 0 - \frac{1}{2} = 0$$

//

$\Rightarrow \langle +|+\rangle$

$$\left(\frac{1}{\sqrt{2}}\langle 0| + \frac{1}{\sqrt{2}}\langle 1|\right)\left(\frac{1}{\sqrt{2}}|0\rangle + \frac{1}{\sqrt{2}}|1\rangle\right)$$

$$\frac{1}{2} + 0 + 0 + \frac{1}{2} = 1$$

//