

$|0\rangle \langle 0| \xrightarrow{\quad} |1\rangle \langle 0| \qquad |2\rangle \langle 0|$

$\downarrow \uparrow \quad \uparrow \quad \downarrow$

$|0\rangle \langle 1| \xleftarrow{\quad} |1\rangle \langle 1| \qquad |2\rangle \langle 1|$

$\downarrow \uparrow$

$|0\rangle \langle 2| \qquad |1\rangle \langle 2| \qquad |2\rangle \langle 2|$