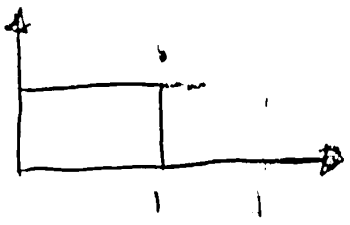
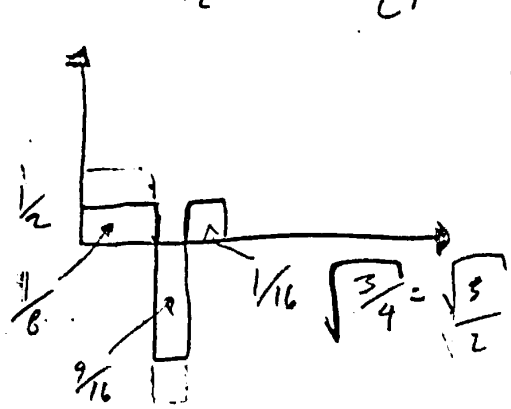
$p_1(t) = q_1(t)$

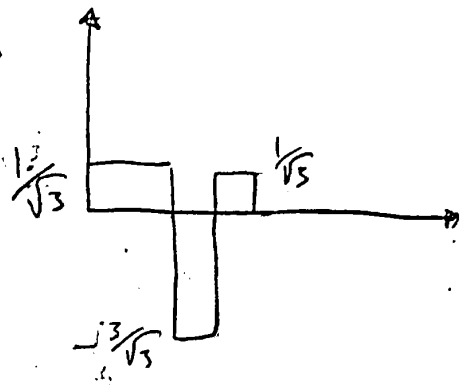


already normalized

$e_2(t) = p_2 - \langle p_2, q_1 \rangle q_1 \qquad q_2$

$= p_2 - \frac{1}{2} q_1$





$e_3 = p_3 - \langle p_3, q_2 \rangle q_2 - \langle p_3, q_1 \rangle q_1$

$= p_3 - \left(\frac{1}{2\sqrt{3}} + \frac{1}{4}\left(\frac{3}{\sqrt{3}}\right) - \frac{1}{4}\left(\frac{1}{\sqrt{3}}\right)\right) q_2 - \langle p_3, q_1 \rangle q_1$

$= p_3 - \left(\frac{2}{4\sqrt{3}} + \frac{2}{4\sqrt{3}}\right) q_2 - \langle p_3, q_1 \rangle q_1$

$= p_3 - \frac{1}{\sqrt{3}} q_2 - 0\, q_1$