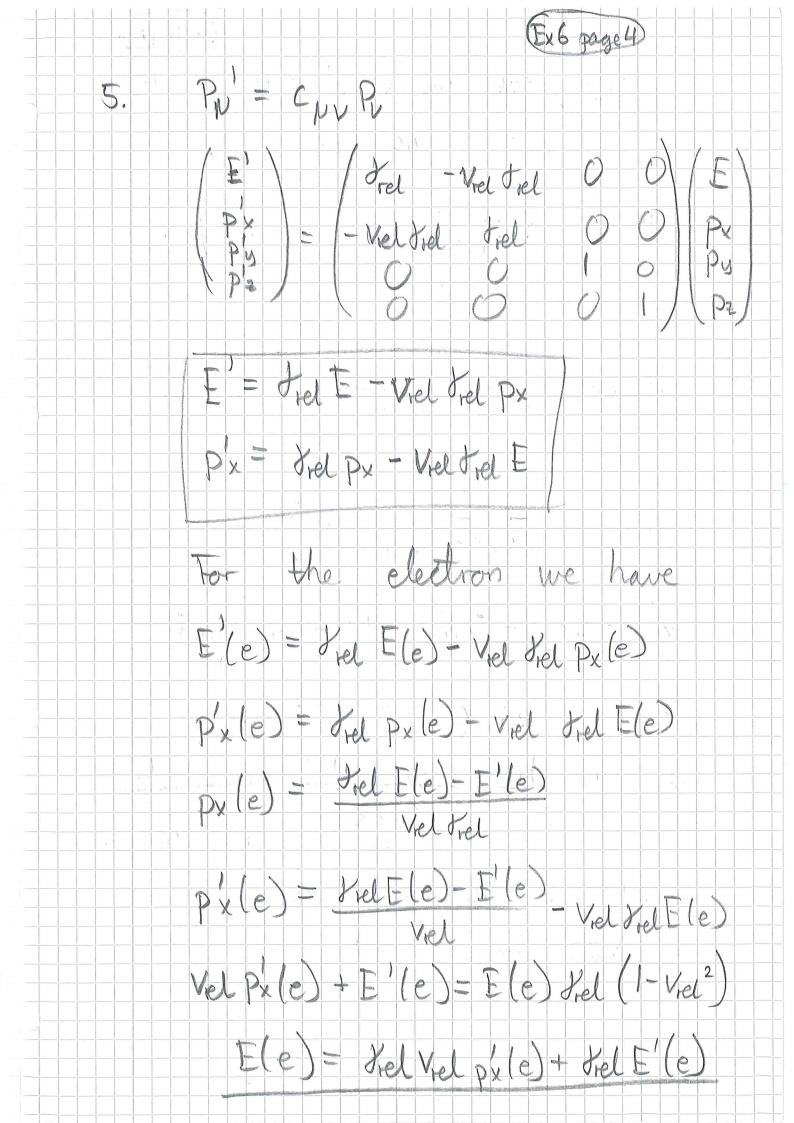
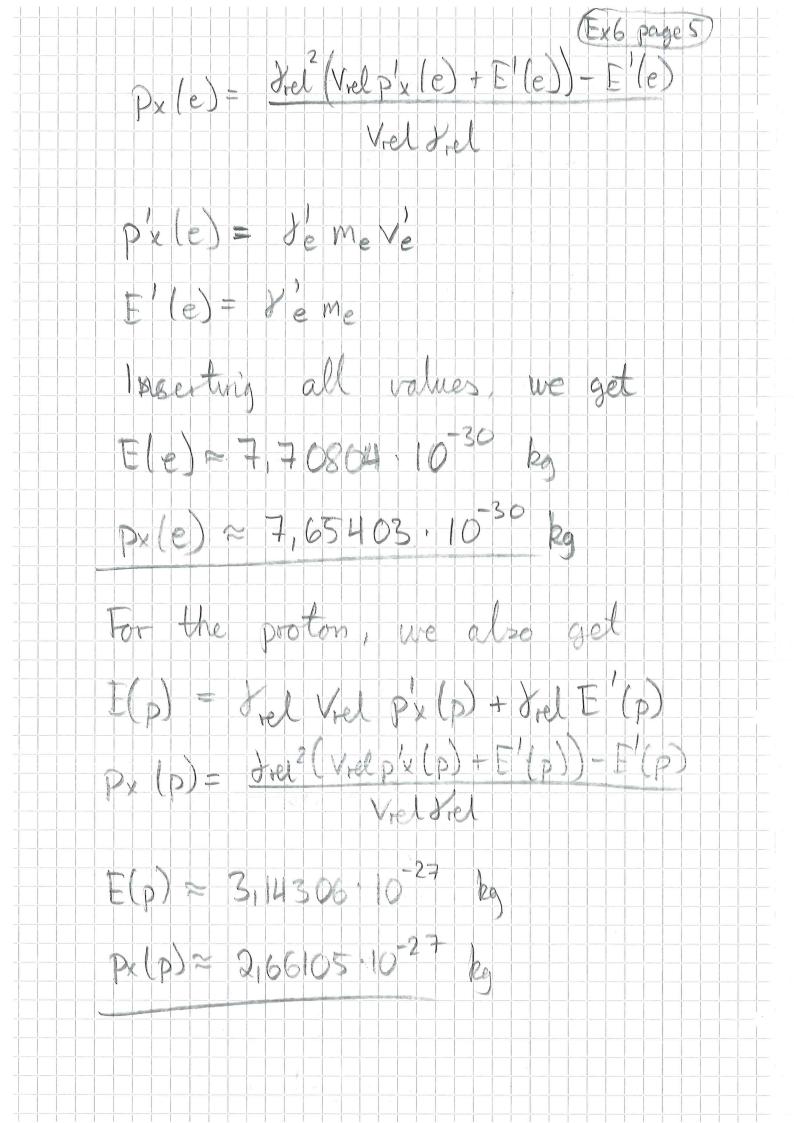
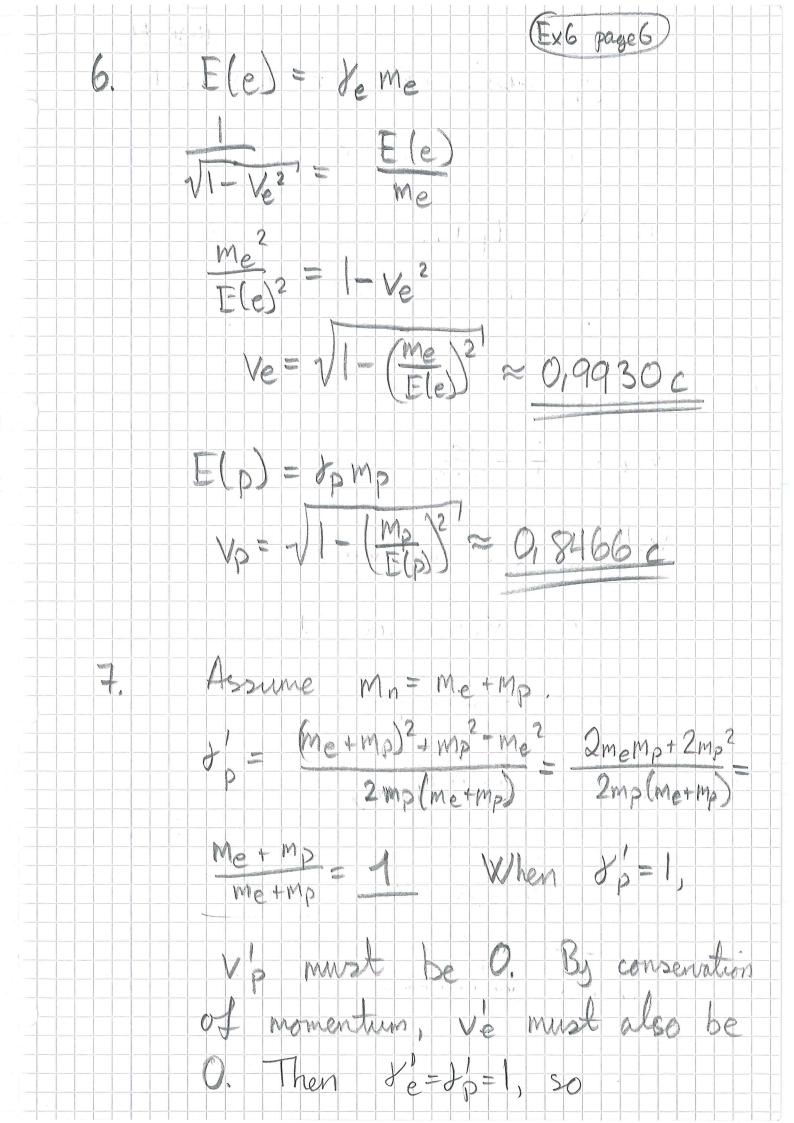


(Ex6 page 3) serting the numerical values for the masses, we get $y_{e} = \frac{m_{n}^{2} + m_{e}^{2} + m_{e}^{2}}{2} \approx 2,529865$ 2 mn Me This gives Ve = ± 1 1 + 2,5298652 = ± 0,91856c $JP = \frac{m_n^2 + m_p^2 - m_e^2}{2 m_n m_p} \approx 1,0000008$ $V_{p} = \pm V_{1} - \frac{1}{1,00000008^{2}} = \pm 0,00127c$ We see that ve and vp have two possible signs. For conservation of momentum to hold, these need to be opposite. We will choose v'e to be positive and Vp to be negative.







(Ex6 page 7) energy must also be conserved (E'(n) = J'nmn = mn = me+ mp = J'eme + J'pmp= E'(e) + E(p)). Since energy is released in the reaction, this cannot be true. Vx = Velv 8. Vy - Vrel Vx Vx = Vx - Vrel Vx) + Vrel = Vx (1+ Vrel Vx') Vx + Vrel Vx) Vx (e) = Vx (e) + Vrel 0,91856+0,847 1+Vrel 1,4 (e) = 1+0,91856:0,847 ≈ 0,9930c Vx (p) = Yx '(p) + V, el = 0,8466 c his is the same as we got earlier