55. (a) The mass of the elevator is $m = 27800/9.8 = 2837$ kg and (with $+y$ upward) the acceleration is $a = +1.22$ m/s^2. Newton's second law leads to

$$T - mg = ma \implies T = m(g + a)$$

which yields $T = 3.13 \times 10^4$ N for the tension.

(b) The term "deceleration" means the acceleration vector is in the direction opposite to the velocity vector (which the problem tells us is upward). Thus (with $+y$ upward) the acceleration is now $a = -1.22$ m/s^2, so that the tension $T = m(g + a)$ turns out to be $T = 2.43 \times 10^4$ N in this case.