

HW.1

2-20: 52 [s]

2-26: (a) Back light must go on first, (b) 0.196

2.36: 600 [m/s]

2.41: 1549 [m]

2.46: (a) 33.3 [year], (b) 6.33 [year], (c) 14.5 [year], and (d) 14.5 [year]

2.50: (a) $-(c/v)50$ [cm],
(b) and (c) you may have your own answer since this is a conceptual questions.

2.51: You can drill this by yourself.

2.55: YES = movement partially toward must be compensating for time dilation effect

2.58: 180 [Hz]

2.63: (a) $u_y = \sqrt{c^2 - (u_x)^2}$, (b) $(u_x)' = 0$, $(u_y)' = c$

2.65: (a) $u' = \sqrt{(0.8c)^2 + (0.6c)^2} = c$, (b) $(u_x)' = 0$, $(u_y)' = c$