Problem 1) Multimode Dispersion Estimate
Problem 2.2 of the text.

Problem 2) Cut-off Wavelength For a Single Mode Fiber
Problem 2.4 of the text.

Problem 3) The Chirped Gaussian Pulse
a) For $\kappa = 0$ in Eq.(2.27) [ an initially unchirped Gaussian ], deduce equation Eq.(2.28) [ for $\kappa = 0$ of course ] using the approach discussed in class.

b) Thus demonstrate that the first equation on page 51 is in fact correct [when $\kappa = 0$ ] and that the equation in the middle of page 54 immediately follows for the band-limited pulse situation. ( In problem set 1 you used this to calculate the broadening of a 1 ps pulse ( Problem 3 ) ).

Problem 4) Optimal Initial Pulse Width For a Single Mode Fiber With Chromatic Dispersion
Problem 2.13 of the text.