Note: Students are encouraged to work together and discuss the problems. However, each student must arrive at her/his own final answers. Show all your work. Simply copied homework will result in zero.

1. (10 points) Prof. Jung’s left eye has a minimum strength of 60 D. (a) What strength lens is required to correct his far vision? (b) Without a corrective lens what is the farthest distance he can see things clearly? Assume his left eye’s lens-to-retina distance is 2cm.

2. (10 points) (a) What is the accommodated strength of a farsighted man who can see objects clearly that are no closer than 80 cm? (b) What eyeglass lens strength will allow him to see object clearly at 25 cm distance? Assume his left eye’s lens-to-retina distance is 2cm.

3. (10 points) A very myopic student is able to see clearly no farther away than 20 cm. (a) What is the relaxed strength of her eye? (b) What strength contact lens will allow her to see distant objects clearly and to look good? Assume her eye’s lens-to-retina distance is 2cm.

4. (10 points) The lens-to-retina distance of a patient is 1.94 cm and the fully accommodated strength of her eye is 54.0 D. (a) What is the closest object (distance) she can see clearly? (b) What eyeglass lens strength will allow her to read at a normal distance of 25 cm?

5. (10 points) The lens-to-retina distance of a patient is 2.1 cm and the totally relaxed strength of his eye is 51.0 D. (a) What is the most distance object he can see clearly? (b) What eyeglass lens strength will correct his distant vision?