**Physics 30 – Lesson 9**

## Optics – Lenses

/60

**Practice problems**

a. (real, inverted, smaller)

•

•

2f

f

•

•

f

2f

b. (real, inverted, same size)

•

•

2f

f

•

•

f

2f

c. (real, inverted, larger)

•

•

2f

f

•

•

f

2f

d. (no image forms)

•

•

2f

f

•

•

f

2f

e. (virtual, erect, larger)

•

•

2f

f

•

•

f

2f

f. (virtual, erect, smaller)

•

f

•

f

**Assignment**

Convex, Converging

1)

/2

Concave, Diverging

/2

2.

a. (real, inverted, smaller)

•

•

2f

f

•

•

f

2f

/2

b. (real, inverted, same size)

•

•

2f

f

•

•

f

2f

/2

c. (real, inverted, larger)

•

•

2f

f

•

•

f

2f

/2

d. (no image forms)

•

•

2f

f

•

•

f

2f

/2

e. (virtual, erect, larger)

•

•

2f

f

•

•

f

2f

/2

f. (virtual, erect, smaller)

•

f

•

f

/2

3)



/4

4)



/4



5)

/4

6)



/3



7)



/7

8)



/5

9)



/4



10 20 30 40 50 60 70 80 90 100 110

10)



/5

11)



/2