Names _____

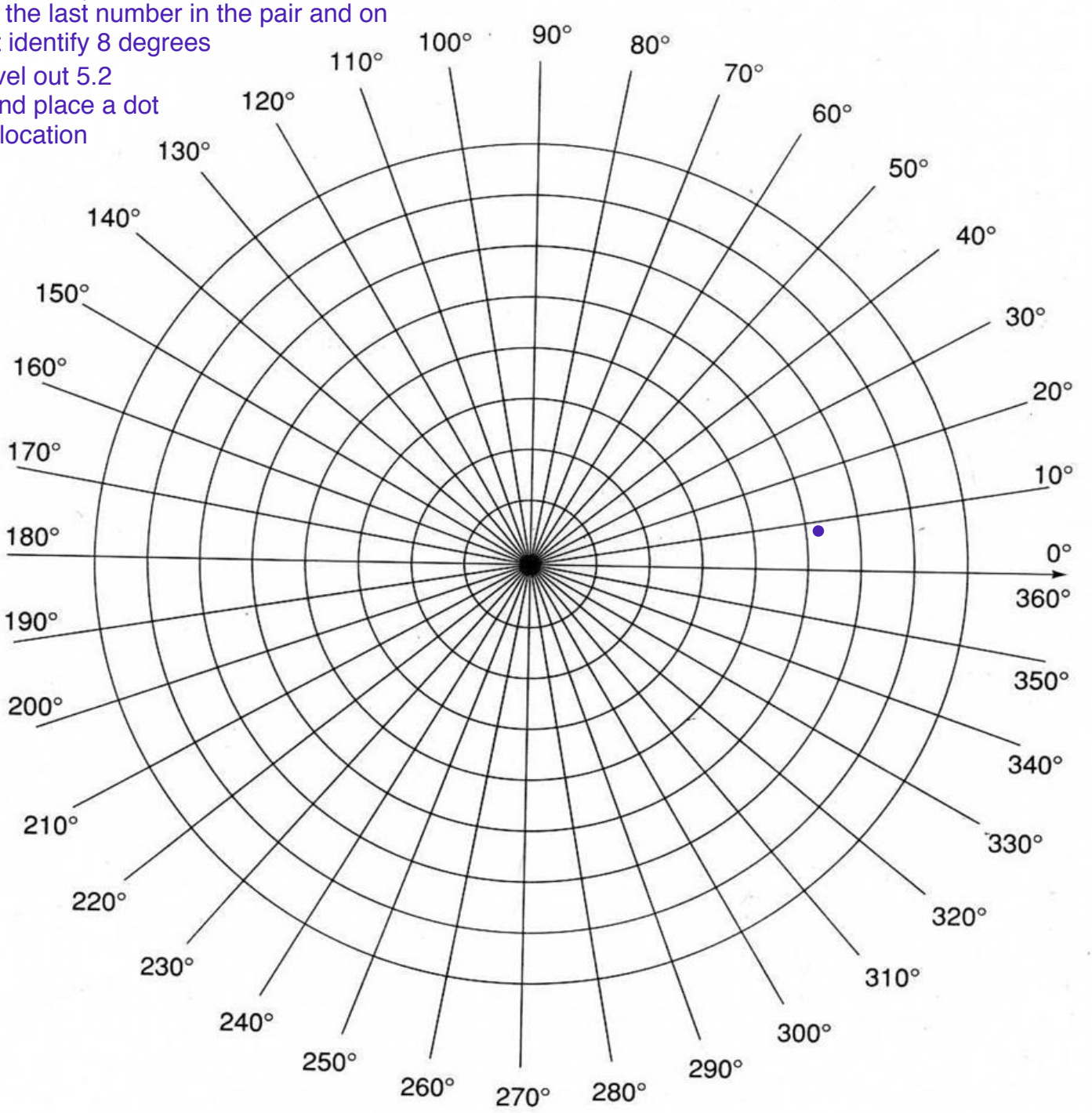
ASTRONOMY - IN-CLASS EXERCISE - GALAXIES

1. You are an astronomer in another galaxy. You measure the distance and direction to a number of H II regions in your sky – all in the same plane. Plot the locations of the HII regions on the following graph and determine what your galaxy looks like, and how far you are from the center of it.

Ex: (5.2, 8)

(i) read the last number in the pair and on the plot identify 8 degrees

(ii) Travel out 5.2 rings and place a dot at that location



2. Look at the the shape of the galaxy and decide if it is a spiral, elliptical, or irregular:
SHAPE _____

3. Location of the center: (R,θ) = (,)

R(x10,000 ly)	*angle (degrees)*
5.2	8
4.6	11
5.1	21
4.6	28
8.1	38
5.3	40
7.7	42
4.8	47
1	47
8	49
7.3	57
6.6	60
5	62
0.5	65
4.3	70
2.7	71
6.3	72
8.5	71
1.9	75
8.1	75
5.2	76
8.3	79
4.7	80
3	82

R(x10,000 ly)	*angle (degrees)*
7.5	84
3.5	86
5.3	89
7.3	91
4.3	91
5.3	95
6.1	97
3.4	98
3	100
3.9	105
2.9	110
5.1	111
8.5	114
8	111
3.9	119
2.9	122
5.6	121
4.7	123
7.2	123
3.3	150
7.2	157
5.4	160
4	163
6.2	167

R(x10,000 ly)	*angle (degrees)*
2.1	203
0.8	210
1.8	225
0.5	270
5.3	348
4.7	355