



Student ID: _____

OBSERVATIONAL EXAM – 1ST NIGHT - SOLUTIONS

1 – Telescope already pointed to that region (or not?) (5minutes)

Answer: 24,0 arc minutes (0.4°). We will tolerate up to 10% error as correct answer. Error between 10 to 20% will be considered 70% correct.

2 – Exact answer is **magnitude 7.9** but we will assume values between 7.7 – 8.1 as correct (0.2 magnitude tolerance). Values between 7.5 – 7.7 or 8.1 – 8.3 will be considered as 70% correct. (5 minutes)

3 - (5 minutes)

Brighter:	White/blue ()	Yellow (X)	Red () (K0III)
Dimmer:	White/blue (X)	Yellow ()	Red () (B9IV)

If the student is not able to point to the star the evaluator will do so, but student loses half of the points.

4 – Targets pointed by the evaluator will be M22, M8, M7 and M57. Student will have 30 seconds to evaluate each target.

Object 1 (M22)	(GC)	Object 3 (M7):	(OC)
Object 2 (M57)	(PN):	Object 4 (M8)	(EN)

5 – Students will have **3 minutes** to complete this task.



Student ID: _____

OBSERVATIONAL EXAM – 2ND NIGHT - SOLUTIONS

1 – Student will have **2 minutes** to accomplish this task.

2 – R: **(6 minutes)**

- a) 1.5
- b) 0.5

3 – R: ~ **4.5'** (4'18"). 4 to 5 arc minutes will be considered 100% correct answers. 3.0 – 3.9 or 5.1 – 6.0 arc minutes will be considered 70% correct. **(5 minutes)**

4 – **(5 minutes)**

Brighter: White () blue () Yellow (**X**) Red () **(K3II)**

Dimmer: White () blue (**X**) Yellow () Red () **(B8V)**

5 – Targets pointed by the evaluator will be M4, M8, M6 and M57. Student will have 30 seconds to evaluate each target. **(2 minutes)**

Object 1 (M4) (**GC**)

Object 2 (M57) (**PN**):

Object 3 (M6): (**OC**)

Object 4 (M8) (**EN**)