NAME: ______________________________

STUDENT NUMBER: _________________

YOUR TA: ___________________________

ASTRONOMY 101: SIZES AND DISTANCES IN THE SUN-EARTH-MOON SYSTEM:
Astronomy Lab Answer Sheet

This is the answer sheet to the Lab. On this sheet you are provided with blanks to enter your results. Use this sheet to record data and the results of your calculations. **Also include answers to all of the numbered questions in the Lab (there are 15) on your own paper and hand that in with this sheet.** Please show all the work for your calculations.

- Circumference of the Earth that Eratosthenes would have found: ____________ km. (Question 3)
- Radius of the Earth that Eratosthenes would have determined: ____________ km. (Question 4)
- Measured height of the obelisk: ____________ feet.
- Measured length of the shadow of the obelisk: ____________ feet.
- Radius of the Earth that you determined from your measurements: ____________ km. (Question 5)
- Time it takes the Moon to sweep out its diameter on the sky: ____________ hours. (Question 8)
- Time at which the Moon just starts to enter the umbra: ____________ Universal Time.
- Time at which the Moon just reappears as a thin bright cresent: ____________ Universal Time.
- Time it took the Moon to sweep out Earth's shadow during the lunar eclipse: ____________ hours.
- The Earth is a factor of ____________ bigger than the Moon as determined from the timing argument.
- Measured radius of the Moon: ____________ pixels.
- Measured radius of the Earth: ____________ pixels.
- The Earth is a factor of ____________ bigger than the Moon as determined from the curvature of Earth's shadow during the lunar eclipse.
- The radius of the Moon: ____________ km. (Question 12)
- The distance to the Moon: ____________ km. (Question 13)
- The distance to the Sun: ____________ km. (Question 14)
- The radius of the Sun: ____________ km. (Question 15)

Summary Table

	Actual Values	Values determined in this Lab
Radius of the Earth	6,378 km	km
Radius of the Moon	1,738 km	km
Radius of the Sun	696,000 km	km
Distance to the Moon	384,400 km	km
Distance to the Sun	149,600,000 km	km