SCORE (5 pts max)	

ASTRONOMY 2 THIRD HOUR SESSION "K" ACTIVITY: Astronomy Apps	NAME	KEY - K		
	DATE		ID#	

Open the app Star Chart

1. **Facing west, find a constellation that contains a very bright, named star near and above the horizon. Give the name of the constellation, and the star.**

Instructor Check	Instructor Check

2. **What is the azimuth of the star from question #1? (ROUND to the nearest degree).**

Approximately 270 deg

3. **Of the three stars Rigel, Spica, and Canopus—determine which is most easily visible from Rocklin on Friday of this week at 10pm.**

Fall: Rigel, Spring: Spica

4. **What is the Right Ascension and Declination of the star from question #3? (ROUND RA to the nearest minute, and Dec to the nearest degree).**

Fall: 5h 15m Spring: 13h 25m	Fall: -8 deg Spring: -11 deg

5. **Returning to the current time, find a constellation closest to the zenith that contains a bright, named star. Give the name of the star, and its altitude. (ROUND alt to the nearest degree)**

Instructor Check	Approx 90 deg

6. **Face north and find the constellation _Ursa Major___. What is the brightest star in this constellation?**

Alioth

7. **What is the apparent magnitude of the star in question #6?**

+1.76

8. **Set the date to noon of Friday this week. What time will the sun ___Rise___?**

6:08 am

9. **Keeping the date set to Friday of this week, set the app to the time you determined in Question #8. Which of the eight planets is visible in the sky?**

Uranus, Mercury, Venus, Neptune, Saturn, Jupiter

(Questions continue on back)

10. For the same time and date in #9, what is the brightest planet that is above the horizon? How far is it from the Earth?

Venus	**1.46 au**

Answer the remaining questions using the app Sky Safari. The time should be set to current time and date.

11. Find the comet _1P/Halley__. What constellation is it in? What is its apparent (visual) magnitude? What is its distance in astronomical units?

Hydra	**25.5**	**34.5 au**

12. How many times further away from us is the object in Question 11, compared to the average distance the Earth is from the Sun?

34.6

13. Find the belt asteroid _Ceres__. What is its diameter in km?

848 km

14. The naked eye can see to magnitude 6; good binoculars can see to magnitude 10; our campus telescopes could see to approximately magnitude 14, and the Hubble Space Telescope can see to magnitude 30. What optical system(s)—naked eye, binoculars, campus telescope, or HST, could detect the object in Question 11?

HST

15. What optical system(s)—naked eye, binoculars, campus telescope, or Hubble Space Telescope, could detect the object in Question 13?

Binocs, Scope, HST

16. Change the date to _Jul 25_____ and set the time to _2:55 am__. What 1st magnitude star (+1.5 or brighter) has most recently risen, nearly due East? What constellation is it in?

Aldebaran	**Taurus**

17. Can the Sun ever be in the sky, near the star in Question #16? If so, on what day? (Hint: use SC001 star chart)

Yes	**June 1**

Fill in options

6: Ursa major/Ursa minor: answers = Polaris or Alioth

That results in Q#7 having answers +2 (and 9.1) or 1.76

8: Rise/Set

11: 1p/Halley or 10p/Temple 2

13: Ceres/Pallas/Vesta

16: July 25/Nov 25 and 02:45/ 04:00
Answers = Aldebaran/Spica and Taurus/Virgo

That results in Q#17 having answers June 1 or Oct 18