

## TEST

### The Escapades of Chester Cheetah and Tony the Tiger

You need the following maps:

Missouri state highway map

USGS Ebenezer Quadrangle

Tony the Tiger, Kellogg's beloved Frosted Flakes mascot, and Chester Cheetah, the enigmatic Cheetos mascot, were carpooling together to the National Food Mascot convention in Springfield, Missouri. Traveling from their home in San Diego, they passed through many states until they came to Kansas City on highway 70. What type of route is highway 70?   1   (1pt) In Kansas City, they wanted to see the power and lights district containing the Sprint Center, Municipal auditorium, and Bartle convention center along which highway?   2   (1pt, hint: use inset). What highway must they turn onto from highway 70 to the above highway   3  (1pt). Chester and Tony continue South towards Springfield on I-49, and they then turn onto state highway 7. They have just passed the city of Humansville. What county is Humansville in?   4  (1pt) Suddenly, they receive a call from fellow mascot Mr. Peanut. His car has crashed in Jefferson City and he needs a ride. Not wanting to let down a fellow mascot, they decide to help him get to the convention. Unfortunately, they have already passed the correct intersection in the town of Collins. What highway intersects with state highway 7 at that location?   5   (1pt) After turning back, they drive   6   (1pt) miles until they reach the intersection in Collins. In Collins, Chester's Cheeto addiction strikes, and he desperately needs to find a place to buy cheetos. Tony suggests they stop by at the place marked by a symbol looking like a gray christmas tree near Wheatland on the way to Jefferson City. What does this symbol mean?   7   (1pt). How many miles away is it from Collins?   8   (1pt). The trip is uneventful until they reach the Lake of the Ozarks. Chester wonders about the weird shape of the lake. Tony tells him that it is a(n)   9   (type of lake, 1pt) lake and that it is formed by   10   (2pt). Shortly after the passing the city of Lake Ozarks, Tony yells out, "Dam!" What is the name of the dam that Tony saw?   11   (1pt)

Chester laments that they won't get to spend time together at the nice lake, but Tony reminds him that Mr. Peanut is in need. Tony notices a red star and the map where they are and asks Chester what it is. He explains that \_12\_ (2pt).

Soon, the duo reaches Jefferson City. Looking at the inset, Tony says, "My cousin, Tiger Woods, is a professional golfer. He would love this city because there are \_12\_ (1pt) golf courses in Jefferson City." They call Mr. Peanut, and he tells them he is near the post office. "Which one?" Tony asks. "The Northernmost one, at the intersection of \_14\_ (1pt) and \_15\_ (1pt)" Ok. That's near the \_16\_ (1pt), where the Governor works, right?" "Yeah."

Mr. Peanut is delighted to see them, and they can finally attend the food mascot convention. They plan to drive back southwest on US-54, and continuing towards Springfield on US-65. But then, Mr. Peanut informs them that his son, Baby nut, is currently going to college in the city of Rolla, the \_17\_ (1pt) of Phelps county, and that they must pick him up. Tony guesses that he probably goes to the \_18\_ (1pt) (name of school), and enters it into his GPS. It directs him to go southeast on US-50 before turning onto US-63 and reaching Rolla, then turning onto Interstate \_19\_ (1pt) towards Springfield. Mr. Peanut apologizes for the delay, but Tony remarks that it is only a minor detour in terms of distance, and it may actually be faster due to there being less traffic on the highway. Why might there be less traffic on the interstate than on US-54? \_20\_ (2pt) So, they reach Rolla and pick up Baby Nut, now studying horticulture at the school. Baby Nut thanks them, and they set off on their journey towards the convention. Chester asks Mr. Peanut how both he and Baby Nut can exist, since according to Planters lore, Baby nut was only created because Mr. Peanut died. Mr. Peanut explains that he faked his own death to get out of the advertising gig and retire, perhaps spend time with his son. Chester says he wishes he could do the same, but that Lays would give him no such opportunity. After all, it ain't easy being cheesy. Tony tells Chester to cheer up and look at the green rectangles on the map which signify a \_21\_ (1pt). Looking at their name prompts Chester to begin playing Tom Sawyer (hint hint) by Canadian rock band Rush. What name causes him to do this? \_22\_ (1pt). Chester

begins cutting some cheetos up with a razorblade before eating them. Chester supposedly got this habit from his time in prison, but that's a story for another time. For now, Mr. Peanut points out a blue triangle on the map, exclaiming, "Hey, that's where they had my fake funeral! They only buried me there because I served in 'Nam." What does a blue triangle represent in general, and what does this specific one refer to?   23   (1pt),   24   (1pt). Soon, they reach the city of Lebanon, along the   25   (1pt) Creek. It has gotten late, so they decide to stay the night. Which state highways pass through Lebanon?   26   (3pt). The next morning, Mr. Peanut frantically wakes up the gang and inform them that they have overslept and that there are only 3 hours before the convention. By the time they get on the road, there is only 1.5 hours until the convention. Will they make it on-time? Going at an average speed of 70 miles per hour, calculate how long it will take them, in minutes. Round to the nearest hundredth, and show your work.   27   (3 pt tie breaker)

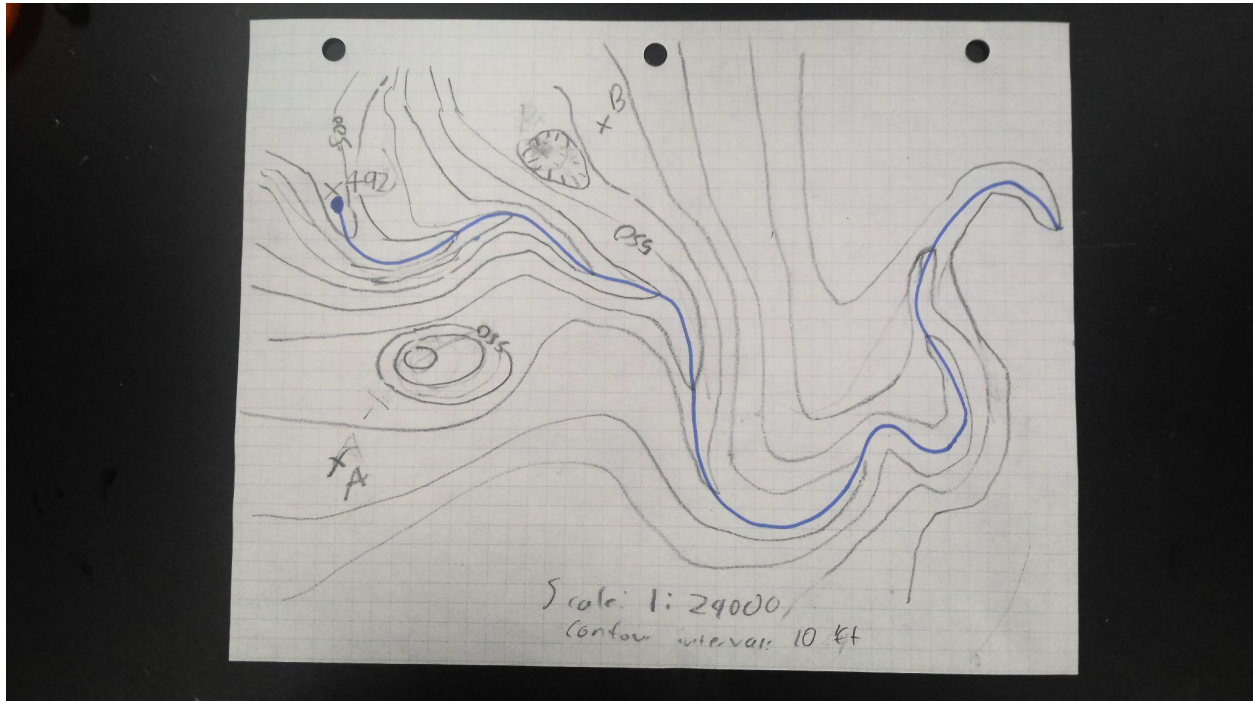
After a long and tiring day of talking to fans and promoting products, Chester and Tony decide to go hiking north of Springfield. They previously picked up an Ebenezer Quadrangle at a tourist info center on the way to Springfield, represented by   28   (1pt). What series is the map?   29   (1pt) What is the contour interval?   30   (1pt) They enter the area on state highway   31   (1pt), the only highway running north-south through the entire quad. They turn   east   (1pt) (direction) towards the trailer park, where they park their car and begin walking towards Fullbright Spring Park at an azimuth of   32   (1pt). On the way, they notice a bad smell. What could be the source of this odor?   33   (1pt). From the park, they walk north towards   34   (1pt), the largest lake on the quad. What sector is the lake primarily in?   35   (1pt) On the way, they cross the   36   (1pt) river, which runs primarily   37   (1pt). Chester notices that some of the contours are slightly bolded in addition to having numbers on them. Tony explains that these are   38   (1pt). They decide to set up a picnic at the tip of the easternmost inlet on the lake in section 25. What is its latitude?   39   (2pt) Its longitude?   40   (2pt) They enjoy a sunset before returning to the trailer park and beginning the long journey back to California.

Bonus questions that I couldn't fit into the story:

What is the name of the plus signs on the map, of which there are 4? \_41\_ (1pt)

What are the PLSS coordinates of the oil field in the northern sector of the map? \_42\_ (3pt)

For the next few questions, use the attached topo sample.



Calculate the stream gradient in feet/mile. Round to the nearest 100th. \_43\_ (ignore if you don't have the physical copy)

Draw a topographic profile between the points marked A and B.

### PART 3: SAMPLE MAP DRAWING

Now, you will draw a sample map of Chester Cheetah's island home.

Label it as section 25

Label the counter interval 10 ft

Draw a  $\frac{3}{4}$  mile diameter circular island in the middle of the section.

Label the rest as coast, except for a small reef in the N  $\frac{1}{2}$ , NW  $\frac{1}{4}$

Label the latitude and longitude at the SW corner: 32 degrees, 47 minutes, and 35 seconds N, 117 degrees, 14 minutes, and 54 seconds W (one point per)

Draw Chester's house at an elevation of 40 ft in the SW  $\frac{1}{4}$  NE  $\frac{1}{4}$

Draw a bridge at the northernmost point of the island, and a light duty road leading from that bridge to the house

Draw an intermittent stream running from an origin 660 ft south of Chester's house running towards the ocean at a bearing of S  $63^\circ$  E

Finally, Chester loves his Alsace wine. Draw a vineyard at an elevation of 20 ft in the NW  $\frac{1}{4}$  NE  $\frac{1}{4}$  SE  $\frac{1}{4}$

### ANSWER KEY:

#### The Escapades of Chester Cheetah and Tony the Tiger

Tony the Tiger, Kellogg's beloved Frosted Flakes mascot, and Chester Cheetah, the enigmatic Cheetos mascot, were carpooling together to the National Food Mascot convention in Springfield, Missouri. Traveling from their home in San Diego, they passed through many states until they came to Kansas City on highway 70. What type of route is highway 70? Interstate. In Kansas City, they wanted to see the power and lights district containing the Sprint Center, Municipal auditorium, and Bartle convention center along which highway? I-670. What highway must they turn onto from highway 70 to the above highway? I-35. Chester and Tony continue South towards Springfield on I-49, and they then turn onto state highway 7. They have

just passed the city of Humansville. What county is Humansville in? Polk county Suddenly, they receive a call from fellow food mascot Mr. Peanut. His car has crashed in Jefferson City and he needs a ride. Not wanting to let down a fellow mascot, they decide to help him get to the convention. Unfortunately, they have already passed the correct intersection in the town of Collins. What highway intersects with state highway 7 at that location? US-54 After turning back, they drive 5 miles until they reach the intersection in Collins. In Collins, Chester's Cheeto addiction strikes, and he desperately needs to find a place to buy cheetos. Tony suggests they stop by at the place marked by a symbol looking like a gray christmas tree near Wheatland on the way to Jefferson City. What does this symbol mean? Roadside park. How many miles away is it from Collins? 9. The trip is uneventful until they reach the Lake of the Ozarks. Chester wonders about the weird shape of the lake. Tony tells him that it is a(n) Oxbow (type of lake) lake and that it is formed by meandering sections of rivers being cutoff from the rest of the river. Shortly after the passing the city of Lake Ozarks, Tony yells out, "Dam!" What is the name of the dam that Tony saw? Bagnell dam Chester laments that they won't get to spend time together at the nice lake, but Tony reminds him that Mr. Peanut is in need. Tony notices a red star and the map where they are and asks Chester what it is. He explains that they are used to find distances between other locations marked stars.

Soon, the duo reaches Jefferson City. Looking at the inset, Tony says, "My brother, Tiger Woods, is a professional golfer. He would love this city because there are 2 golf courses in Jefferson City." They call Mr. Peanut, and he tells them he is near the post office. "Which one?" Tony asks. "The Northernmost one, at the intersection of Broadway St. and US- 50" Ok. That's near the State Capitol, where the Governor works, right?" "Yeah."

Mr. Peanut is delighted to see them, and they can finally attend the cereal mascot convention. They plan to drive back southwest on US-54, and continuing towards Springfield on US-65. But then, Mr. Peanut informs them that his son, Baby nut, is currently going to college in the city of Rolla, the county seat of Phelps county, and that they must pick him up. Tony

guesses that he probably goes to the University of Science and Technology, and enters it into his GPS. It directs him to go southeast on US-50 before turning onto US-63 and reaching Rolla, then turning onto Interstate 44 towards Springfield. Mr. Peanut apologizes for the delay, but Tony remarks that it is only a minor detour in terms of distance, and it may actually be faster due to there being less traffic on the highway. Why might there be less traffic on the interstate than on US-54? There are more lanes on the interstate, meaning there is a good chance that traffic will be faster So, they reach Rolla and pick up Baby Nut, now studying horticulture at the school. Baby Nut thanks them, and they set off on their journey towards the convention. Chester asks Mr. Peanut how both he and Baby Nut can exist, since according to Planters lore, Baby nut was only created because Mr. Peanut died. Mr. Peanut explains that he faked his own death to get out of the advertising gig and retire, perhaps spend time with his son. Chester says he wishes he could do the same, but that Lays would give him no such opportunity. After all, it ain't easy, being cheesy. Tony tells Chester to cheer up and look at the green rectangles on the map which signify a national forest. Looking at their name prompts Chester to begin playing Tom Sawyer (hint hint) by Canadian rock band Rush. What name causes him to do this? Mark Twain National Forest. After yelling that "There is no [expletive] drummer better than Neil Peart," Chester begins cutting some cheetos up with a razorblade before eating them. Chester supposedly got this habit from his time in prison, but that's a story for another time. For now, Mr. Peanut points out a blue triangle on the map, exclaiming, "Hey, that's where they had my fake funeral! They only buried me there because I served in 'Nam." What does a blue triangle represent in general, and what does this specific one refer to? point of interest, State Veterans' Cemetery. Soon, they reach the city of Lebanon, along the Dry Auglazi Creek. It has gotten late, so they decide to stay the night. Which state highways pass through Lebanon? State Highways 64, 5, 32 (1 point per correct answer). The next morning, Mr. Peanut frantically wakes up the gang and inform them that they have overslept and that there are only 3 hours before the convention. By the time they get on the road, there is only 1.5 hours until the

convention. Will they make it on-time? Going at an average speed of 70 miles per hour, calculate how long it will take them, in minutes. Round to the nearest hundredth, and show your work.

Distance = 47 miles,  $47/70 = 40.29$  minutes, so yes, they will make it to the convention.

After a long and tiring day of talking to fans and promoting products, Chester and Tony decide to go hiking north of Springfield. They previously picked up an Ebenezer Quadrangle at a tourist info center on the way to Springfield, represented by a brown circle with a triangle in it. What series is the map? 7.5 minute series What is the contour interval? 10 ft They enter the area on state highway 13, the only highway running north-south through the entire quad. They turn east (direction) towards the trailer park, where they park their car and begin walking towards Fullbright Spring Park at an azimuth of  $80^{\circ} + 3^{\circ}$ . On the way, they notice a bad smell. What could be the source of this odor? the nearby sewage disposal plant. From the park, they walk north towards McDaniel Lake, the largest lake on the quad. What sector is the lake primarily in? Sector 5 On the way, they cross the South Dry Sac river, which runs primarily west. Chester notices that some of the contours are slightly bolded in addition to having numbers on them. Tony explains that these are index contours. They decide to set up a picnic at the tip of the easternmost inlet on the lake in section 25. What is its latitude?  $37^{\circ}17'46'' + 3''$  Its longitude?  $93^{\circ}18'17'' + 3''$  They enjoy a sunset before returning to the trailer park and beginning the long journey back to California.

Bonus questions that I couldn't fit into the story:

What is the name of the plus signs on the map, of which there are 4? Graticule tick marks

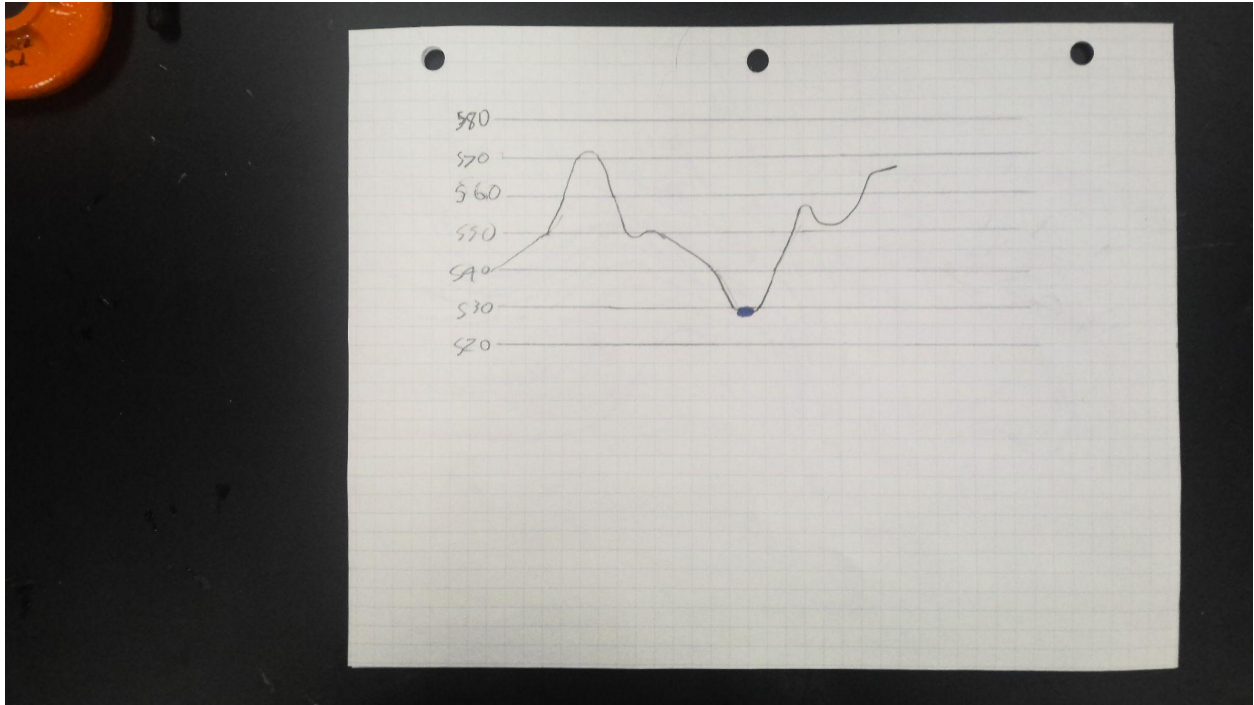
What are the PLSS coordinates of the oil field in the northern sector of the map? NW  $\frac{1}{4}$ , SW  $\frac{1}{4}$

Section 7, T 30 N, R 21 W (0.5 points per component, plus a bonus 0.5 if all are correct)

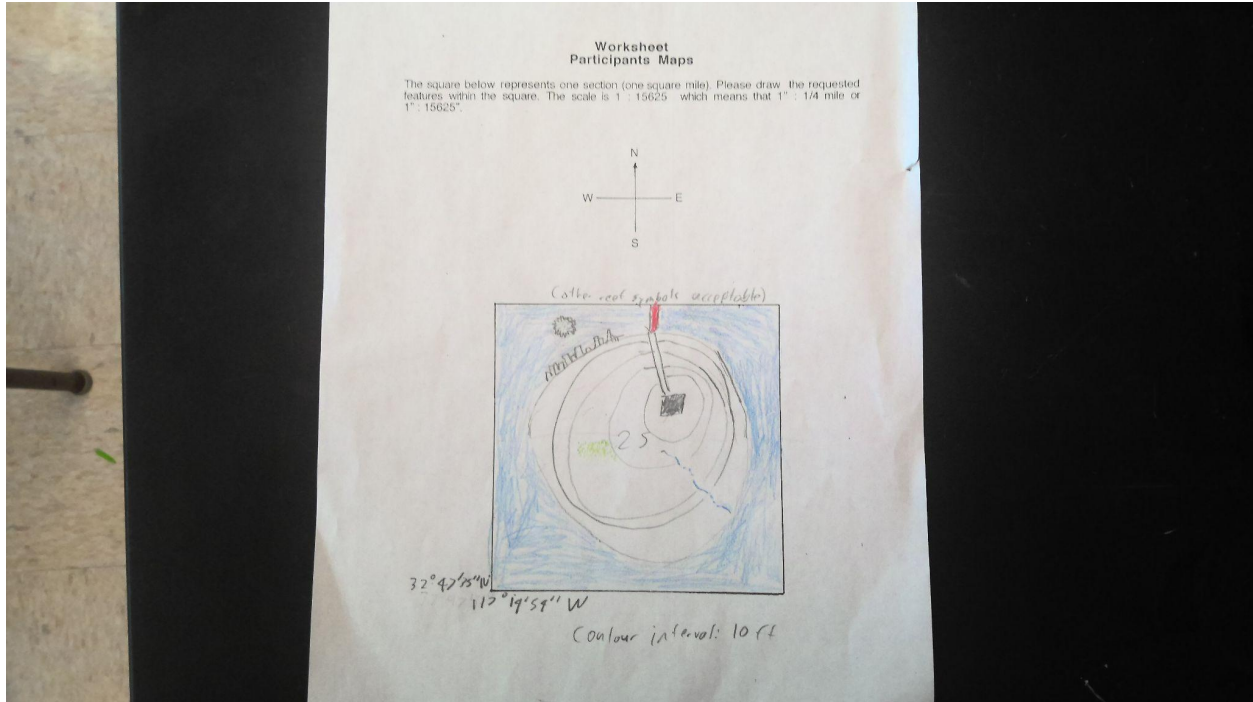
For the next few questions, use the attached topo sample.

Calculate the stream gradient in feet/mile. Round to the nearest 100th.  $16.53 + 0.07$

Draw a topographic profile between the points marked A and B. (give points based on accuracy, shape, and the river, also note that I, the test writer, actually suck at drawing these so take this key with a grain of salt)



Map drawing:



(give one point for each correct feature, give half points for correct feature in an incorrect position, or incorrect feature in correct position)

Email [wise.mystical.tree42@gmail.com](mailto:wise.mystical.tree42@gmail.com) if you have any suggestions, feedback, or if you believe the answer key to be incorrect in some way.