

## ***Road Scholar Event 2008: To Tournament/Event Supervisor:***

This is a Road Scholar Event developed as an “Emergency Event” for use when other plans fall through. You will need about a week lead time (with luck) to obtain materials. The event room should have large flat desks and good lighting. Since this event may be used at different places and times, you must keep all event materials secure until after SO nationals in May 2008.

To run this event you will need 2 maps:

### **USGS Leavenworth, WA 7.5 min topographic map, 2003.**

(Available from USGS on line, about \$5 each

### **AAA Alaska-Northwest Canada Map, 2007** (free to AAA members)

In a real pinch, if you have a computer lab, you can have students view the Leavenworth topo on [www.topozone.com](http://www.topozone.com). Since the website will block students from doing some questions and will give them the answers to others, this is a last resort.

There are no time-sensitive questions in this event, so the same maps with different dates would probably work perfectly well.

If you are using this event for a regional competition you may wish to edit it down. A recycle bin of stray questions is included.

I suggest you make all questions should be worth the same amount. I do not allow part credit for missing units, etc, but you do what you want. Same thing with answer key- feel free to change answer ranges, fix mistakes, etc.

Road Scholar gets a lot of ties. I suggest breaking them as follows:

Work from the last question forward, using “closeness to ideal” for calculation questions.

The first question one team gets (or is closer) and the other misses acts as the tiebreaker. This is really fast, and most of the harder questions are at the end of the event.

**Students** must bring a protractor, ruler, and a USGS Map Symbol Sheet. They can bring a calculator, notes, reference materials, and other measuring devices. They may not bring computers.

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Event Writer

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**Road Scholar Competition**  
**“Yukon Jack”**

*To the Student: Welcome to Road Scholar!*

To do this event, you will need two maps:

**AAA Alaska- Northwest Canada road map.**

**USGS Leavenworth, WA Topographic Map.**

You will need pens, pencils, a ruler, protractor, and calculator.

You may use any printed resources you brought with you.

You may not use computers in this event.

Your names, team name, and team number must be written both on this booklet and the answer sheets.

You may write in this booklet for scrap, but your final answers must be written on the answer sheets provided.

Your answers must be complete – measurements *must* have units; town names *must* include state, province, or other appropriate identification.

If you are not certain as to what you should be doing, what map to use, or if a question does not make sense to you, ask the event supervisor what to do.

*Make sure you read the story line in italics. Some of the questions will not make sense without the story, so they will be harder to do.*

**Cautions: Avoid penalty points or disqualification!!!**

Make sure you do not make any marks on any of the maps provided to you.

Make sure you start working only when told to do so, and stop exactly when told to do so by the event supervisor.

*Good luck!*

**Road Scholar—Yukon Jack -- Answer Sheet**

Student signatures: \_\_\_\_\_  
\_\_\_\_\_

Team Number \_\_\_\_\_

Team Name \_\_\_\_\_

1. \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. AK8 is \_\_\_\_\_; Yukon 1 is \_\_\_\_\_

16. \_\_\_\_\_

17. \_\_\_\_\_

18. \_\_\_\_\_

19. \_\_\_\_\_

20. \_\_\_\_\_

21. \_\_\_\_\_

22. \_\_\_\_\_

23. \_\_\_\_\_ hours and \_\_\_\_\_ minutes # correct page 1= \_\_\_\_\_

*Ties are broken from the last question forward. Closeness to ideal values is used on measurement and calculation problems.*

**Road Scholar— Yukon Jack -- Answer Sheet**

Student signatures: \_\_\_\_\_  
\_\_\_\_\_

Team Number \_\_\_\_\_  
Team Name \_\_\_\_\_

24. \_\_\_\_\_

25. \_\_\_\_\_

26. latitude= \_\_\_\_\_ longitude = \_\_\_\_\_

27. \_\_\_\_\_

28. \_\_\_\_\_

29. \_\_\_\_\_

30. \_\_\_\_\_

31. East is \_\_\_\_\_ and \_\_\_\_\_ ; West is \_\_\_\_\_ and \_\_\_\_\_

32. \_\_\_\_\_

33. \_\_\_\_\_

34. \_\_\_\_\_

35. \_\_\_\_\_

36. \_\_\_\_\_

37. \_\_\_\_\_

38. \_\_\_\_\_

39. \_\_\_\_\_

40. latitude = \_\_\_\_\_

41. longitude = \_\_\_\_\_

42. Azimuth = \_\_\_\_\_

43. Bearing = \_\_\_\_\_

44. section \_\_\_\_\_ , town \_\_\_\_\_ , range \_\_\_\_\_ # correct map problem= \_\_\_\_\_

45. UTM Easting = \_\_\_\_\_ # correct page 2 = \_\_\_\_\_

*Ties are broken from the last question forward. Closeness to ideal values is used on measurement and calculation problems.*

**Road Scholar— Yukon Jack -- Answer Sheet**

Student signatures: \_\_\_\_\_  
\_\_\_\_\_

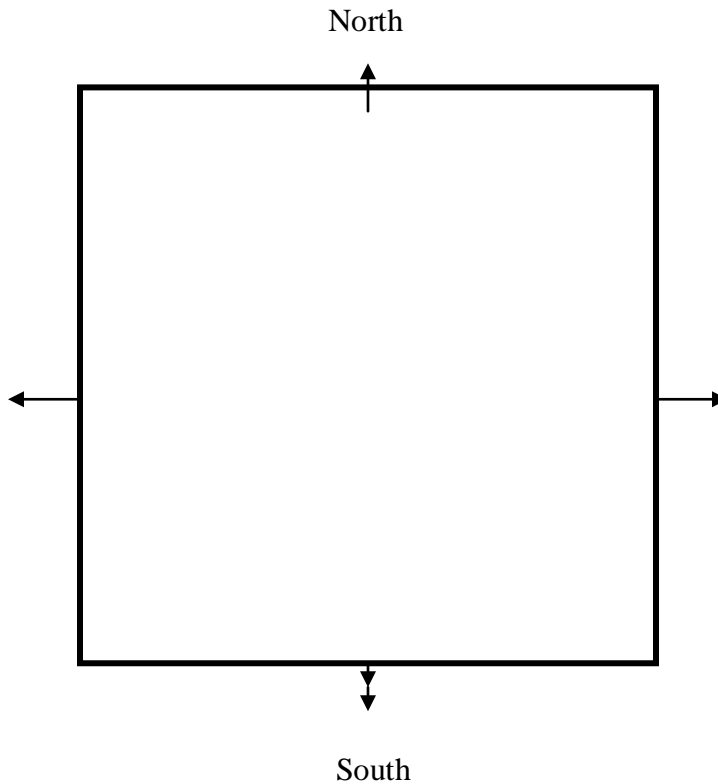
Team Number \_\_\_\_\_

Team Name \_\_\_\_\_

Questions 46 to 49:

Thanks for offering to draw a map! The map will show an area of one square mile. Mark the square mile section off into quarters, just like the PLSS would do. Then imagine each quarter is broken up again. You are drawing a topo map with a 10 foot contour interval.

In the map area, the land is mostly flat with a few hills. At the exact center of the area, there is a house for Jack and Nukka. It sits on top of a hill that rises to an elevation of 675 feet. The hill is mostly round, except for its western side which is steep going down to a stream. The stream flows North to South across the property and into the nice round lake (with a dock) in the Southwest quarter. The surface elevation of the lake is 623 feet, which is the lowest point on the map. There is a planted apple orchard covering the Northeast quarter section. Jack will be able to go out his front door to fish and his back door to pick apples! Jack likes to help children, so there is a school at the SE1/4 of the SE1/4 of this land section. The school is on a little hill, elevation 635 feet.



*Check list:* 1 pt each for- House on hill   Orchard   Stream and Lake   School on hill

Student signatures: \_\_\_\_\_

Team Number \_\_\_\_\_

\_\_\_\_\_ Team Name \_\_\_\_\_

### **Yukon Jack**

*Hey there, Southerners! Welcome to Alaska!! My name's Yukon Jack. Now, I know you folks may not think of yourselves as Southerners, but to us up here in Alaska pretty much everyone else is a Southerner.*

*I work on an oil rig up here at Prudhoe Bay, AK. That's just about as far north as you can go these days without getting your feet wet. Time was, the whole arctic was frozen, but well—we got us a little global warmin' goin' on these days. It's sort of an inconvenient truth, if you know what I mean.*

*Now, I just love bein' in Alaska, but once a year I need to go down South on vacation. This year I'm headed for Leavenworth, WA. It's right on the Wenatchee River and the whole area is famous for its apples. We can't grow apples up here yet—my friend Al says maybe soon --but I would just love to pick a few. I even got a copy of the **USGS Leavenworth, WA** topographic map to bring along! Nukka, my trusty sled dog, is coming along so I have someone to talk to. You can't be too fussy up here.*

*We're going to drive South all the way to Homer, AK. I keep a float plane there, and we can fly on down to Leavenworth. I got myself a raggedy old copy of the **AAA Alaska-Northwest Canada Map** to help. My eyes ain't what they used to be since that fight with the grizzly bear-- so maybe you and Nukka can help me read the map.*

*With our weather, ice, and mud, driving around Alaska can be sort of tricky. Why, the AAA even tells you how to prepare for Alaska driving right on the map.*

1. For winter driving, what are three things the AAA suggests you have in your car so you can survive in case you get stuck?

*Well, I'm glad to see that you know how to prepare. But it's June 21, the first day of summer, the sun is shinin' and we're goin' on summer vacation! OOO—EEE!!!*

2. What are the AAA map grid references for Prudhoe Bay, AK?

3. What other states of the United States of America border directly on Alaska?

*I'm going to start off by driving Southwards from Prudhoe Bay on AK Route 11.*

4. What material makes up the surface of the road on AK 11?

*Nukka rides with her head out the window of the truck. "Hey Jack", she says, "what's that utility line running alongside the road?"*

5. What is the specific name of this utility line?

*Nukka notices a lot of rivers along the road. "Hey Jack", she says "do you notice that pretty much all these rivers flow in the same direction?"*

6. In what cardinal direction do the rivers that Nukka sees flow?

*Nukka and I take turns driving all day (Yeah, it's easy to get a license up here) until we reach the Yukon River. We decide to camp for the night along the banks of the Yukon.*

7. How many miles does the AAA say Jack and Nukka drove between Prudhoe Bay and the Yukon River?

*Nukka gets a real funny and confused look on her face as we watch the sun set from the campsite. "Jack! Something is wrong!! The sun is going away!" she barks. I have to remind you Southerners that Nukka is from Prudhoe Bay and in June the sun never, ever sets. Right now, she is one confused looking dog.*

8. Tracing Jack and Nukka's route Southwards from Prudhoe Bay to the Yukon River, at what point would they first be able to see the sun set below the horizon on June 21?

*While we watch the sun set, my cell phone rings. It's my cousin Julie, who is homesteading in Wales, AK (AAA C-3). That place is so isolated that her neighbors sometimes use their dog sleds to travel over to Asia to visit family.*

9. What body of water separates North America and Asia at this point?

10. At their closest point, how far apart are the mainlands of North America and Asia? (Do not count islands, only mainlands). Express your answer in miles.

*Julie tells me she is calling me to wish me a happy Summer Solstice day, June 21. She just got off the phone with her friend Vladimir in Uelen, Russian Federation (B-3). Vladimir criticized President Putin, and is now on vacation in Ulen.*

11. On June 21 in Alaska, what is the date in Uelen, Russian Federation?

*Next morning, we leave the Yukon River and drive the rest of the way South to Fairbanks, AK. We have a nice baked salmon dinner in a real restaurant and notice many men and women in military uniforms.*

12. Name two military bases close to Fairbanks.

*We leave Fairbanks driving South along AK Rte 3. A few hours South of Fairbanks, we approach Denali National Park. Denali is famous for its wildlife and for containing the highest mountain in North America. We decide to stay overnight in the area and visit the park. WE decide to stay in Healy, AK, ten miles North of the park entrance, because I know there is some AAA recommended lodging.*

13. How can Nukka find out about the AAA recommendations for Healy, AK?

14. What is the highest mountain in North America? Give its name and summit elevation.

*Denali was great! We saw a grizzly bear and he didn't want to fight me! A few miles South of the entrance to Danali Nationla Park, we see AK 8 turn off to the East. It has weather*

warning signs at its entrance. Nukka is reading the map and looks at Yukon Route 1 ( AAA K-19 to H-17) in Yukon Territory, Canada. Yukon 1 runs along the MacKenzie River, and it has weather warnings too. “I’ll be dog-gonned! Says Nukka. “Can’t these humans make up their minds?”

15. How do the weather warnings differ between AK 8 and Yukon 1?  
(Answer as: AK8 is \_\_\_\_\_ and Yukon 1 is \_\_\_\_\_)

16. Many roads in the Yukon Territory cross rivers by ferry during the summer. How does traffic cross these rivers during the winter?

*It’s just too confusing to drive over to the Yukon Territory, so Nukka drives as we head on South towards Anchorage, AK.*

### **Map Change\*\*\* Map Change\*\*\* Use Anchorage, AK Insert Map**

*We drive into Anchorage. “He Jack—Look at this! A real city!” says Nukka. “We should stop and tell the mayor and governor how impressed we are!” I start looking for City Hall.*

17. What is the location of City Hall in Anchorage? (Answer as: Closest to the intersection of \_\_\_ and \_\_\_)

### **Map Change\*\*\* Map Change\*\*\* Return to Main Alaska Map**

*Nukka is surprised to learn that the governor is not in Anchorage. At City Hall, Mark the mayor tells us that the governor is in Juneau, AK (AAA N-13). He also tells us we cannot drive to Juneau because no roads go there. “ You could take the ferry to Juneau” he says. We are building a bridge to nowhere, but not to Juneau”*

18. If I want to take the Inside Passage ferry system to Juneau, who do I contact for fare information?

*We stop for a nice baked salmon lunch in Anchorage. After lunch we continue towards Homer, AK (AAA K-6). Then we can fly down to Leavenworth to pick apples. For this part of the trip we are going to use the AAA **Strip Map #6A**-it’s on the opposite side of the main Alaska map.*

### **Map Change\*\*\*\* Map Change\*\*\*\* Use AAA Strip Map #6A-**

*Nukka reads the strip map to me as I drive. She notices right away that the strip maps have a few notations different than the main Alaska map, so she reads the map legend. She does not want to have to pull me around on a sled if I leave the road.*

19. Along what section of the road is the best scenery located?

20. This strip map differs from the usual practice of North being “straight up”. How many degrees away from “straight up” is compass North on this map? (no direction needed)



21. Heading South and East from Anchorage on AK 1, we see a traffic light at mile 78.9 and make a left turn to drive to Whittier, AK. What special road feature do we use to reach Whittier?

22. After a nice walk around Whittier, we return to the AK Rte. 1 and continue South towards Homer. We stop for lunch in Soldotna, AK at mile 94.2. What three types of travel services are available at Soldotna?

*After some nice salmon for lunch, we continue on to Homer. It's been a long trip, but lots of fun—and I got to spend quality time with Nukka.*

23. If we had driven non stop from Fairbanks, AK to Homer, AK, how long does the AAA estimate it would have taken us? (Answer as \_\_\_ hours, \_\_\_ minutes)

*We get in my float plane. I warm up the engine, head across the water, and take off. Leavenworth, here we come! I can taste the apples already, and they don't taste like salmon!!*

### **Map Change\*\* Map Change\*\*\* Use USGS Leavenworth, WA Topographic Map**

*We fly the float plane into the Leavenworth, WA topographic map area. Nukka is navigating while I fly the plane. Nukka is looking for some flat water to land on.*

*There is a sewage disposal pond in the middle of the map area that looks pretty flat, and running right past it is a straight stretch of Icicle Creek. We make a perfect landing and have a rest at the sewage plant. We breathe in the fresh mountain air while Nukka shows me the topo map.*

24. What is the contour interval of this map?

25. What is the scale of this map?

26. What is the latitude and longitude in the Southeast corner of the map?

27. What protected area makes up most of the map area?

28. The compass in the airplane is not reading correctly, and I am going to adjust it for this area. What is the magnetic declination at the center of the Leavenworth Quadrangle map? (Give amount and direction)

*Nukka is looking around the Leavenworth National Fish Hatchery. We have been paying for salmon at restaurants and she sees a lot of free fish here. She notices two buildings on the map and measures the map distance between them as 1.00 cm.*

29. In what map sector is the fish hatchery located?

30. How far apart are the 2 buildings on the earth's surface?

*Leavenworth depends on visitors for most of its income. A worker at the sewage disposal plant loans us his car so we can drive around a bit and spend money. We came here to buy apples, so that's OK with us. We drive a few hundred meters West from the plant, then North*

*on an unnamed road. As we drive North on this road, we notice that the land along the East and West sides of the road are quite different.*

31. How does the land along the East side of the road differ from the land along West side of the road? (Answer as: the East is \_\_\_ and \_\_\_ but the West is \_\_\_ and \_\_\_)

*We cross over the Wenatchee River. Nukka sees people coming downstream really fast on rafts. "Oh Wow-- Oh Wow- - Oh Wow! Can we-- Can we-- Can we go rafting? How steep is this River?" Nuthin' like an excited Husky.*

32. From its entry into the map area, how much does the River drop? (Measure the maximum possible drop from the map edge "neat line" to the bridge we just crossed.)

*Right after we cross the Wenatchee River, we see a road going off toward a golf course to our right. Nukka is anxious to reach town. "Are we there yet?" she asks.*

33. Measured along our road, what is the distance from the golf course road to US Route 2? (express your answer in meters)

*At the end of the road we reach US 2. Just at the intersection we see a brass marker to our right. "USGS, 1175" it says.*

34. What three types of information has USGS recorded for this site?

*Almost due North of our location, up in map sector N2, we can see a big Communications Tower up on Tumwater Mountain. No wonder our cell phones are working so well! The map shows several US Forest Service roads going to the tower.*

35. What is the ground elevation at the base of the tower?

36. What kind of vehicle is needed to use the US Forest roads near the tower?

37. What is the straight line distance from the 1175 USGS brass marker to the communications tower? (Express your answer in meters.)

38. Nukka is surprised to see all the shops in Leavenworth. "I know that USGS usually shows every building, and I saw very few marked here" she says. How does USGS indicate that they are not trying to show each building within Leavenworth?

*Our first stop in town is a place selling rafting trips. "Come and raft on Snow Creek, in beautiful map Sector SW7" says the sign.*

39. In what compass direction does Snow Creek flow?

*We do some shopping, then drive Eastward on US 2 towards the Eastern map boundary. A little before we reach the edge of the map area, Nukka sees an apple orchard between US 2 and the Wenatchee River. Wow!! I finally found some fresh Delicious apples! In fact, I see a lot of orchards along the Wenatchee River. You can't get any fresher apples than here, so we both eat a bunch.*

*We see a sign saying “If you eat apples, please go to the Cascade Jr/Sr High School on Rt 209, just outside town, and pay for them.” We drive over.*

*The school has a large main building and a small one that houses the Principal’s office. Li-Chin Cai, the Principal, greets us. “Welcome to our beautiful town, she says. I do many different things here. I grow wonderful apples and you are welcome to eat some more. Perhaps you will even buy a farm and come back again” I can help you find the town easily- in fact, my GPS unit is right on my desk!”*

40. What is the latitude at the center of Dr. Cai’s office?

41. What is the longitude at the center of Dr. Cai’s office?

*Li-Chin explains that this is a small school, so she also answers phone calls for the Leavenworth Chamber of Commerce. “These mountains can be tough on cell phone service, but we have that great communications tower up on Tumwater Mountain. Have you seen it? People are always calling me and asking for directions. Go ahead, ask me directions!”*

42. Nukka speaks right up. “What is the Azimuth from your office to the communication tower?

43. I join in. How about if I wanted to go fishing right at the junction of Icicle Creek and the Wenatchee River—just barely in Map Sector W6. There is a cross in the water marking mile 0 on Icicle Creek. Could you tell me the old fashioned compass bearing from here to there? Just start by saying North or South!”

44. Hey Dr. Cai, says Nukka. How about you tell us where you are right now using the Public Land Survey System?

“Silly dog—of course I can do that”. My office is in Section \_\_\_\_, Town \_\_\_\_, Range\_\_

45. Nukka continues. “Hey Doc-how about that newfangled UTM system? Can you tell me the Easting value for your office?

“Easy as pulling a sled with 5 gorillas in it, Nukka. The Easting is \_\_\_\_”

*Dr. Cai sure was helpful, but I have to get back to Alaska. As we drive back to the plane, Nukka has an idea. “Jack, why don’t you think about buying a piece of land near Leavenworth? If you describe what you want, I am sure we could find a Science Olympiad kid to draw out a map for you. Dr Cai could use the map to find us a farm, and then we could come back for more apples anytime we want!”*

Questions 46 to 49:

Jack is going to tell you exactly what he is looking for. Could you sketch out a map for him? Make sure you use regular USGS symbols and notation. This will count as four questions. The description is on your answer sheet, and using a pencil would be a smart.

*Well now, you Southern folks sure were a big help!! Nukka and I are back at Prudhoe Bay pumpin’ oil for you right now! Al is sittin’ around with that a big medal around his neck and sends his regards. We’ll be in Leavenworth at the farm next year- why not come and visit?*

**Remember to check your units! Make sure you hand in all papers and maps.**

1. heavy clothes // down sleeping bag // food/ stove // heater (any 3)
2. C-11
3. none
4. gravel // gravel and paved
5. Trans Alaska Pipeline
6. North
7. 373 miles (exact- no range)
8. arctic circle // 66.6° North latitude
9. Bering Strait // Bearing Sea
10. 50 miles (range 47 to 53 )
11. June 22
12. Fort Wainwright // Eielson AFB //Yukon Command Training Center (any 2)
13. AAA tourbook
14. Mount McKinley 20,320 ft
15. AK8 is closed in winter; Yukon 1 is closed in summer
16. ice bridges
17. 6<sup>th</sup> Ave and F St // 6<sup>th</sup> Ave and G St
18. Alaska Marine Highway System
19. Northern Section
20. 34° ( range 31 to 37-no direction needed)
21. tunnel
22. gas, food, lodging (need all 3)
23. 14 hours and 3 minutes (no range) ( enter total correct this page on answer sheet)

*Ties are broken from the last question forward. Closeness to ideal values are used on measurement and calculation problems.*

*Road Scholar— Yukon Jack -- Answer Sheet*     **Answer Key**

24. 40 ft (exact- no range)
25. 1:24000
26. latitude= 47 30' 00" North Longitude= 120 37' 30" West (no range)
27. Wenatchee National forest
28. 18 ° East (exact no range)
29. section C5 // 5
30. 240 meters (exact)
31. East is flat and open ; West is steep and wooded
32. 410 feet (no range)
33. 984 meters (range 935 - 1035)
34. latitude, longitude, elevation
35. 2560 feet (no range)
36. high clearance vehicle
37. 3120 meters (range 3095 – 3145)
38. developed area shown in gray
39. North
40. latitude = 47 36' 5" North (range 2" to 8")
41. longitude = 120 39' 19" West (range 16" to 22")
42. Azimuth = 314 (range 311 to 317)
43. Bearing = South 19 West (range 16- 22)
44. Section 1 , Town 24 North , Range 17 East
45. Easting = 10 676 337 (range 10676300 – 10676370) # correct page 2 = \_\_\_\_\_

*Ties are broken from the last question forward. Closeness to ideal values are used on measurement and calculation problems.*

# Answer Key

## Map Drawing Problem- Questions #: 46-49

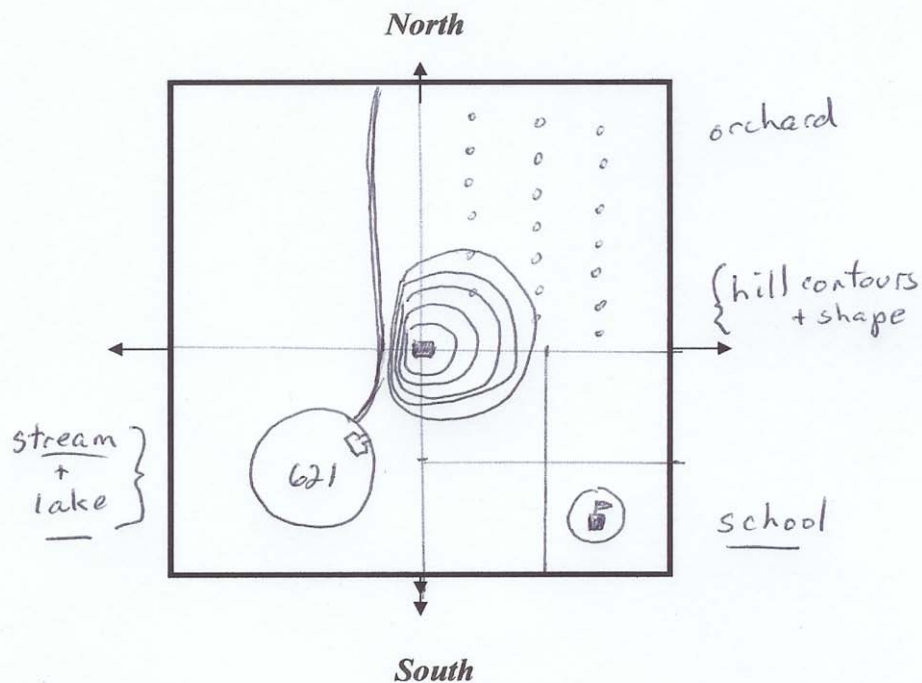
### Look for:

House on Hill—center in map area, contours and shape—round, steeper on West, 5 contour lines

Orchard correct symbol northeast  $\frac{1}{4}$

Stream and lake with dock-elevation marked

School correct symbol in one contour line



Check list: 1 pt each for-

House on hill \_\_\_ Orchard \_\_\_ Stream and Lake \_\_\_ School on hill \_\_\_

# *Recycle Bin*

*These are questions cut from the event. If you wish to modify the event, these may be of use.*

=== What other name does AK Rte 11 have?

===If oil is discovered between Big Diomed Island (B-4) and Little Diomed Island, who owns it?

We notice right away that the road changes when we leave town.

==How is the AAA road classification for AK Rte 2 different in Fairbanks than for AK 3 West of Fairbanks? (answer as: AK 2 in Fairbanks is \_\_\_; AK 3 west of Fairbanks is\_\_\_)

===(alternative to previous) Mt. McKinley is the highest peak in North America. What mountain is the second highest peak in the park? Give its name and elevation.

I decide to head down the Alaska coast and make a quick stop in Skagway, AK (AAA M-13). Skagway is famous as part of the famous Klondike Gold Rush.

Nukka would like to visit her cousin Buck in the town of Haines, AK. Haines is about 16 miles Southwest of Skagway but is located across the Lyman Canal, so we cannot drive there. Nukka says we can go the other way.

===What is the driving distance from Skagway, AK to Haines, AK? (Note: We will have to drive around through Whitehorse, Yukon Territory, Canada. Express your answer in miles.) caution be very careful about miles and km???

“That’s a very descriptive name”, says Nukka. “Where does it go?”

=== Where is the Southern end of the utility line?

===How many intersections have Jack and Nukka passed through between Prudhoe bay and the Yukon River?

As we drive along Southbound on AK 3, Nukka notices the series of black (or green) dots on the map.

===What do the dots mean?

We have a nice baked salmon dinner in a real restaurant and notice many men and women in military uniforms.

=== Name two military bases close to Fairbanks.

**\*\*\*\* Map Change Use Fairbanks, AK Insert Map\*\*\*\***

“Hey Jack”, says Nukka. “Can we stop at AAA and get another copy of the Alaska map? This one is getting kind of dog-eared from the trip”. Good thing we’re both AAA members!”

==What is the location of the AAA office in Anchorage? (Answer as: closest to the intersection of \_\_\_ and \_\_\_.)

== How much will Jack have to pay for the map?

We look at our brand new map. No crude oil, coffee stains, no dog drool—how nice!

**\*\*\* Map Change- Return to Main Alaska AAA Map \*\*\*\*\***

=== To the nearest whole degree, what is the latitude and longitude of Prudhoe Bay, AK?

==How does the AAA map show that the governor might be in Juneau?

*Just past Wasilla, AK (AAA I-7) AK 3 joins AK 1.*

== South of the intersection of these two roads, how does the AAA road classification of AK1 change? (Answer as: the road changes from \_\_\_ to \_\_\_)

What is the highest possible elevation on the hill just north of Cascade Jr/Sr High School?.

Mark Kramer notes:

All you had to ask, is How much does sea level have to rise to flood one of your stops.(Just playing AI).

I have attached your document with my suggestions in red and strikeout.

Do the students need both pen and/or pencils ( Will this start a stampede back to the coaches for pens?)

Love those trick questions like the mayor asks #3, for instance.

#8 - **at what point** do you want **at what location** answer crossing the arctic circle?

#14 - I assume you want the peak or maximum elevation and not the base elevation.

#19 - Because I did not have the strip map - I got lost with question 19 because I thought from the story line we were going south toward Homer AK 1, but your next question is back at Whittier, so what is the **road** in Question 19 that we are on? Is it obvious from the strip map and story line?

#32 Do you want to ask them to express their answer in a certain unit?

#35 Do you want to ask them to express their answer in a certain unit?

Noted in the recycle bin that you had already used two of them.

**Other changes are noted** and I took the liberty of formatting to make the questions stand out from the story line.



Please thank AI for the global warming - It was starting to look like a glacier down here. Glad he came thru before January started.

Hope this is a quick enough turn-around from the semi-retired, working harder then ever Mayor Mark.