

The Mystery Man – Response Sheet

Name: _____

Maps used in this competition:

- HM** – Rand-McNally MI Highway Map
- N** – Negaunee SW Quadrangle
- O** – Omer SW Quadrangle
- P** – Pinckney Quadrangle

Codes used in this competition:

- D&V I** – Detroit and Vicinity Inset
- M** = State Highway Routes as in M-36
- US** = US Highway Routes as in US-23
- I** = Interstate Routes as in I-75

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- * 39-42. See note below
- 43. _____
- 44. _____
- 45. _____

* Questions numbered 39 – 42 are to be answered by drawing the profile on the grid on the second page of this answer sheet.

39 – 42. Begin by placing Boynton’s house on the LEFT side of the grid at its correct elevation. Continue the profile going to the right until you reach the location of Ned’s house. Scoring is as follows:

Question 39: correctly dropping the points onto the grid.

Question 40 and 41: drawing the profile by connecting your points.

Question 42: correctly labeling Boynton’s house, Ned’s house, and any road or river crossing the profile.

1480 -----
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1440 -----
1420 -----
1400 -----
1380 -----
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“The Mystery Man”

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Dudley Dowrong and Clive Petty were punks, plain and simple. They had grown up in East Grand Rapids and had failed at nearly everything they had ever tried. They had once attempted to mug a four foot, ten inch, 90-pound woman in her mid-eighties, but she had easily fought them off with her handbag. They had attempted to steal a car using the owner’s own ignition key, but had flooded out the engine. On this particular day, however, they were certain they were ready for the big time. Just yesterday they had stolen three DVDs and a Hershey bar from K-Mart without getting caught. With this “success” behind them, they were ready to steal something really valuable. When Dudley read in the Grand Rapids Press that an exhibit of antique European jewelry was on display at the Amway Grand Plaza Hotel, they decided that this was their opportunity to hit it big.

Although many of the pieces of jewelry were priceless, Dudley and Clive found that they were permitted to pick up and examine many of them. One piece in particular, a gold locket encrusted with diamonds, very much appealed to Clive, so he simply took it. Napoleon Bonaparte had given this very locket to his wife, Josephine, upon his return from Egypt. It had been insured for \$2,000,000.00. As they turned to leave, they spotted two security guards closely watching them. Clive quickly slipped the locket into the pocket of a man standing next to him. Dudley and Clive then left the exhibition area. They thought they were safe when they had reached the hotel lobby, but they were immediately surrounded by guards and taken to their office for questioning.

The theft had been discovered within minutes, and Jeremy Richdude, owner of the jewelry collection, immediately called his insurance company in Lansing to report the crime.

* * * *

Becky Silverstein, the operations officer for Fine Arts Insurers, Inc., took Jeremy’s call and immediately contacted John Surefind. John was Becky’s top investigator in the Grand Rapids area. He not only worked on Fine Arts Insurers’ toughest cases, but was also a geology professor who relished solving mysteries.

John arrived at the Amway Grand Plaza Hotel, met with Jeremy, and reviewed the security tape. It clearly showed Clive slipping the locket into another man's jacket pocket. John questioned other visitors to the exhibit about this "mystery man," but learned only that someone had overheard him mention that he was on his way to visit his sister in Pinckney.

The security tape showed the "mystery man" holding an ornate music box. John was able to lift two sets of fingerprints off the antique. The prints, along with the man's photo from the security tape, were then faxed to the home office. They were hoping the man could be identified from the firm's extensive data bank. John then called Becky to inform her about the items he had faxed and informed her that the man might be on his way to Pinckney to visit his sister. Becky asked John to return to Lansing as quickly as possible.

John finished his investigative chores, walked to his 2004 Porsche Cayenne, and drove away from the hotel. He took I-196, also called the **1 GR** (a. Gerald R. Ford; b. Richard M. Nixon; c. Ronald Reagan) Freeway, east until it ended at I-96. He then turned right onto I-96 and was traveling SE toward Lansing. He passed through the Grand Rapids suburb named **2 GR** (a. Grandville; b. Wyoming; c. Kentwood), and the houses soon gave way to farmland. It was **3 HM** miles (see mileage chart) from Grand Rapids to Lansing. At 70 mph, he planned to arrive at the office in about **4** (a. 55; b. 58; c. 62; d. 66) minutes.

Becky was at her desk waiting for John to arrive. She was also waiting for Barb and Steve Findum, a husband/wife team and among the very best investigators in the Lansing District. She wanted them to work with John on this case. Becky had already identified the mystery man by running his prints. By hacking into state computers, she had discovered that he drove a red 2002 Mustang. The photo on his driver's license looked very much like the image on the fax she had received from John. His name was Sheldon Kopel, and he did have a sister residing in Pinckney. He also had a sister living in the small town of Omer and a brother in Ishpeming. Becky had discovered that Sheldon was considered a brilliant research chemist, currently on vacation and touring the entire state of Michigan.

Becky was troubled by two unanswered questions. One, why hadn't Jeremy reported the theft to the authorities, and two, was Sheldon somehow involved in the heist? She hoped these questions would soon be answered. She had her best people working on it.

As Becky waited, she carefully studied one of the topographic maps she had requested from the properties department. The maps might come in handy for John, Barb, and Steve in their search for Sheldon. It had been months since she had worked with maps, so she reviewed the Omer SW Quadrangle. She noted that it was drawn in the **5 O** (a. 7.5'; b. 15'; c. 30') series at a scale of **6 O**. The contour interval was **7 O** feet, and the declination between star north and

magnetic north was **8 O**. In the NE $\frac{1}{4}$ / NW $\frac{1}{4}$ / 35 / T19N-R4E, she found **9 O** High School where she had once attended a concert. Becky then spied the SW graticule tick mark which had coordinates of **10 O** N. latitude and **11 O** W. longitude. She had just counted **12 O** (a. 2; b. 4; c. 6; d. 8) graticule tick marks on the map. She was looking at the **13 O** State Forest in sectors 4, 5, and 6 when her secretary's voice came over the intercom informing her that John, Barb, and Steve had just arrived.

"I'm so pleased you're here," Becky said as they sat down at the large table in the conference room.

"What have you learned since I last talked to you?" Barb asked.

"Sheldon Kopel is the man for whom we're searching. He drives a red Mustang, has a sister named Matilda who lives in Pinckney, doesn't have a police record, and is a highly respected chemist. He's very close to his brother, Boynton, who lives outside of Ishpeming in the Upper Peninsula. He visits Boynton at least twice a year and has even built a chemistry lab in his brother's barn."

"I believe we should begin our search for Sheldon with his sister in Pinckney. That's where he said he was going," Steve mused.

"Do you happen to have any maps we can take along with us?" John asked.

"Yes, I have the topographic maps for Pinckney, Ishpeming, and Omer. Omer is where Myrtle, Sheldon's other sister, lives. I also have a Michigan State Highway Map," replied Becky.

"It's time we left for Pinckney," Barb said excitedly. "I've always loved a good chase."

"I have the same maps as you, plus I have almost unlimited computer resources. I plan to stay right here until this case is solved. Call me if I can be of any assistance, and please keep me updated. Have a safe trip, and good luck."

The investigators decided to take the Porsche. John drove, Steve rode in the front passenger seat, and Barb, with the maps, settled into the back seat.

The party left downtown Lansing on I-496 and turned east onto I-96. Barb found Pinckney on the Michigan Highway Map by first finding its grid number on the map index. Pinckney was in grid **14 HM** (a. P-12; b. R-14; c. S-14; d. S-19). The index gave Pinckney's population as **15 HM**. She located the town on the map and saw that it was in **16 HM** County.

"John, take I-96 east to exit number 136, which is an exit for Howell. Turn right so that we are traveling south on D-19. It will take us right to Pinckney."

“What a neat area. Look! They have a ski area and a state recreation area called Brighton.”

“The Brighton SRA is quite large,” said Barb. “It actually covers **17 HM** acres.”

As they neared Pinckney, Barb turned to the Pinckney Quad. She didn’t have the **18 P** Quad, which was the one to the north of the Pinckney Quad. With it, she could have followed their progress from I-96 much easier. As it was, it took her a moment to determine that they had entered the Pinckney Quad area. They entered Pinckney from the north on Pinckney Road (sector 2). It was a **19 P** (a. secondary; b. primary; c. light duty road) Some of the roadway was tinted in purple which informed Barb that the quad had been photo-inspected, but not as yet field checked. Actually the photo revision had been made in the year **20 P**.

They found Matilda Kopel’s house easily. It was the middle house of three located side-by-side in the SE ¼ / NW ¼ / 26 / T1N-R4E. The house was on Pinckney Road. When they knocked on the door, they discovered that Matilda was not at home. As they pondered what to do next, a neighbor appeared and told them that Matilda was kayaking at Hudson Mills Metropolitan Park. The neighbor also told them that they couldn’t miss Matilda as she would be wearing an outrageously huge, yellow hat with blue cornflowers taped to its brim.

Back in the Porsche, John searched for and found the park in sector 9 of the Pinckney Quad. He handed the map to Barb, started the SUV, and turned right (south) onto Pinckney Road.

“Barb, please let me know when we get to North Territorial Road. That’s where we turn left. The entrance to the park is off North Territorial.”

“Will do,” replied Barb.

In less than two miles, they had crossed the bridge over a narrow waterway that separated Portage Lake from Little Portage Lake. The elevation of the bridge was **21 P** feet.

“I can understand why there are so few cottages on Little Portage Lake,” Steve observed. “Most of the lake is surrounded by **22 P** (a. vineyards; b. scrub; c. marsh).

“I wonder how people earn a living around here?” John asked. “I don’t see any stores, factories, or farms.”

“Some may work as open pit miners. In one section alone (14 / T1S-R4E), there are **23 P** gravel pits. There are also radio telescopes in that same section. Hey, I can see the telescopes from here!”

"How high are the radio telescopes?" asked Steve.

"I don't know," Barb replied, "but the ground on which the telescopes are located is **24 P** feet above sea level."

Barb informed John when they were close to North Territorial Road. John turned left onto North Territorial Road and, 0.4 miles from the intersection, made a right turn into Hudson Mills Metropolitan Park. They parked their Porsche and walked north to the boat ramp on the river.

Scanning the river, they spotted Matilda in her kayak leisurely paddling toward them.

"What's the name of this river?" inquired Steve.

"It's the **25 P** River," John replied.

"In what direction is it flowing?" Barb asked.

"It's flowing **26 P** (a. north; b. east; c. south; d. west)," John replied.

"Well, it sure isn't flowing very rapidly."

"We can calculate that while we're waiting for Matilda," John said. "She won't be here for several more minutes."

Spreading the Pinckney quad out onto a picnic table, he continued his explanation. "Up here where the river leaves Portage Lake (sector 9), there's an 850 foot contour. There's an 840 foot contour crossing the river here in the NE $\frac{1}{4}$ / 13 / T1S-R4E. If I measure the distance between these two contours in thousands of feet and divide the drop in elevation by the distance, I will have the stream gradient. So, if the distance is 5100 feet, I'll divide by 5.1."

"But how can you measure the distance?" Barb quizzed. "The river curves."

"I'll use this piece of string." Placing one end of the string onto the 850' contour, he followed the river with the string to the 840' contour. Using the diagrammatic scale in the bottom margin of the map, he determined the distance to be **27 P** feet. Dividing this distance into 10 feet, the drop in elevation, he found the stream gradient to be **28 P** / 1000 feet.

"Just as I said, it's a pretty slow-moving river," Barb remarked.

"Hey, I've been hearing you two say things like NE $\frac{1}{4}$ / NW $\frac{1}{4}$ and SE $\frac{1}{4}$ / NE $\frac{1}{4}$. What in the world are you talking about?"

“Steve, let me explain. It’s the Public Land Survey System, or PLSS, which originated with President Thomas Jefferson. It’s used in most states to describe the location of land areas.” John then proceeded to explain how the system works.

When John had finished, Steve said, “I think I got it. Here in sector 7 is St. Joseph’s Cemetery. Its PLSS would be 29 P.”

“Very good, Steve, You’re a very fast learner.”

Matida, in her kayak, had just reached shore. John and Steve offered to assist her in pulling the kayak out of the river.

“Stay away from me! Matilda shrieked. “I know your kind. You want to steal my purse. Don’t you? I don’t trust any man taller than five-foot-three.”

“Miss Kopel,” Steve pleaded. “I assure you that we mean you no harm, but we do need your help.”

“How do you know my name? Have you been in my car? You probably got my name from the registration. I bet you broke a window to get in. I’m calling the cops. Ill see you no-goods in jail.”

Barb came to the rescue and calmed down the hysterical Matilda.

“We must find your brother, Sheldon. He unknowingly has something that doesn’t belong to him. It’s even possible that he may be in danger,” Barb explained.

“Oh, you mean that old locket with the rhinestones? He told me that he was planning to turn it in at the Grand Rapids Police Department when he arrived home from his vacation.”

“Those aren’t rhinestones, Matilda. They’re diamonds, making the locket very, very valuable. Please tell us where we can find Sheldon.”

“Sheldon was here, but he didn’t care to go kayaking. Instead, he went to visit our sister, Myrtle, in Omer.”

“What’s Myrtle’s phone number? Maybe we can talk to Sheldon.”

“Myrtle doesn’t believe in phones. She thinks they’re much too high tech.”

John, who had sauntered away because he thought Matilda was crazy, rejoined the group and said, “I just talked to Becky. Somehow she got Sheldon’s cell phone number. I tried to call him, but no one answered.”

"We'll try again later, but for now we had better head for Omer," Steve said.

After thanking Matilda and complimenting her on her choice of hats, they returned to the Porsche and started their drive from Pinckney, S-19, to Omer, T-13 on the highway grid. To get from Pinckney to Omer, they took I-96 to US-23. US-23 passed right through Omer.

Barb, using information supplied by Becky, located Myrtle's house on the Omer SW Quad. Barb knew they were in the Omer SW Quad area when they crossed Pine River. US-23 entered the quad by crossing the south neat line with a latitude of 30 O N. Barb found US-23 in sectors 8 and 9 on the Omer SW Quad. It was the only primary road on the quad. It was a straight road traveling at an azimuth of 31 O as it crossed the quad in a northeasterly direction.

"How much longer do we stay on US-23?" John asked.

"We want to turn left off US-23 onto Hagley Road. From Pine River, which we just crossed, to Hagley Road is 32 O miles. We will travel north on Hagley Road until it ends, or for about 1.07 miles. When it ends, we'll turn onto Washington Road. Myrtle lives in the only house on the left. The house is in the SW ¼ / NW ¼ / 16 / T19N-R5E."

Arriving at Myrtle's house, they discovered that she was not at home. Sheldon's Mustang was nowhere to be seen.

"What shall we do? It's getting awfully dark outside," Barb lamented.

"We'll wait for awhile," John replied. "Becky found out that Myrtle walks through the swamp nearly every day around dusk."

"I hope she's not as weird as her sister Matilda," Steve muttered.

"She just might be," John responded. "The house is pretty eerie, and it is in the middle of a swamp."

"It must be near sea level."

"No, John replied as he looked at the Omer SW Quad. "The house is actually 33 O feet above sea level."

"I was only kidding," Steve said jokingly.

"I know. I just like looking at maps."

"Reach for the stars!" shrieked a voice through the still night air.

The investigators turned and found themselves staring at the business end of a double-barreled shotgun. The gun was being held by a woman wearing a camouflage shirt and trousers, combat boots, and a pith helmet with mosquito netting.

“Miss Kopel?”

“How come you know my name?” Did you break into my house? If you took anything, you’re in deep trouble.”

“No, no, Miss Kopel. We didn’t break into your house. We just want to find your brother, Sheldon. He has a valuable piece of jewelry that we must return to its rightful owner as soon as possible.

“Oh, you mean that silly locket with the old pictures inside?” Myrtle said as she slowly lowered the shotgun. Sheldon showed it to me, and I suggested he toss it. He told me he’d return it next week.”

“So, you have seen Sheldon. Is he anywhere near?” Barb asked.

“No, he’s gone to visit our brother, Boynton.”

“Does Boynton live in Ishpeming?”

“Yes, but not right in town.”

“When did Sheldon leave?”

“A couple of hours ago. He was upset at me for not fixing him some blueberry pancakes.”

Thanking Myrtle, they returned to their Cayenne and drove off. Steve tried to call Sheldon, but again there was no answer. As it was already dark, they decided to spend the night in Standish, on US-23, southwest of Omer. In the morning they would make the trip to the Upper Peninsula.

* * * *

The following morning, John called Becky. She had nothing new to report about Sheldon, but she did say that Jeremy still hadn’t contacted the police regarding the theft. He had called Fine Arts Insurers numerous times to ask about getting his money.

John, Barb, and Steve left the motel in Standish at 9:00 A.M. and headed for Ishpeming. They took I75 north. At exit 259, they saw a sign for the **34 HM** Pines

State Park. Barb found the park on the highway map. It was just east of I-75. When they reached the Mackinac Bridge, they paid the toll and drove across to the Upper Peninsula. Looking at the map, they saw that the Straits of Mackinac linked Lake Michigan with Lake 35 HM.

They arrived in Ishpeming at 7:00 P.M. At this time of year there would be sufficient daylight remaining to find Boynton's house quite easily and, hopefully, Sheldon and the locket. They registered at a local motel and prepared to visit Boynton. Barb found Boynton's house on the Negaunee SW Quad. Its PLSS description was NE $\frac{1}{4}$ / SW $\frac{1}{4}$ / 9 / T48N-R27W.

Steve tried to call Sheldon, but again there was no answer. John called Becky who informed him that Jeremy had called again that morning to inquire about the insurance money. She had told Jeremy there was an investigation underway, and that she would call him back when she had more information. She had tried calling several times during the day without success. She had contacted his office and spoken with his associates, but no one had seen nor heard from him. Jeremy had disappeared. Not fully trusting Jeremy, Becky warned John to be especially careful. Jeremy could be anywhere.

They left their motel in Ishpeming (sector 9, Negaunee SW Quad) and drove to Boynton's house, located in sector 36 N of the Negaunee SW Quad. It was nearly dark by the time they had reached the house. They saw Sheldon's Mustang parked by the barn and a man sitting on the front porch of the house.

Parking the Porsche, they walked to the house and asked the man if he might be Sheldon.

"No, I'm Boynton. Sheldon's not here."

"Isn't that Sheldon's Mustang?" Steve asked.

"It might be his car, but that doesn't mean he's here."

"We really have to find him. It's very important that we do."

"He walked over to Ned's place."

"Where might that be?"

"I see you have a map. Follow me into the house, and I'll show you how to find Ned's place."

They walked in and placed the map on the living room table.

"Here's Ned's house," Boynton said as he pointed to the only house in the NW ¼ / NE ¼ / 10 / T48N-R27W. He didn't take the road; he walked cross-country."

"Let's see," John said. "The distance between Boynton's house and Ned's house is **37 N** miles and the bearing is **38 N** degrees. Maybe we can drive to Ned's house by following that bearing. I'll draw a profile to see if our Mustang Cayenne can make it."

John, using a piece of graph paper, quickly drew the profile **39 – 42 N** between the two houses.

"You'll never make it," Boynton remarked. "You have to cross a river, and only a Hummer could do that. You could cross it on foot if you want. There are boulders you can use as stepping stones. You simply jump from one to the next until you're across."

"It's too dark to drive anyway," Steve said.

"Okay, here's what we'll do. Steve and I will hike over to Ned's. Barb, you can drive over. I'll calculate the coordinates for Ned's house, and you can use the GPS in the Porsche.

John then determined the coordinates for Ned's house. They were **43 N** N. latitude and **44 N** W. longitude. Before leaving, Barb reminded John to adjust his compass for the declination between star north and magnetic north.

Barb reached Ned's house only to find that no one was home. She called Steve and told him she would wait for them to arrive. John and Steve showed up in about 45 minutes, and they drove back to Boynton's house. As they approached the barn, they saw a light shining brightly through the window. Parking the car, they walked toward the closed door. Opening the door, they saw a man working with a large array of glassware and chemicals. They instantly recognized the man from his photos. It was Sheldon, a.k.a. the "mystery man."

"You're looking for an old locket. Aren't you?" Sheldon asked. "I don't know how it got into my pocket. I was planning on turning it in to the authorities when I get home next week. It's lying on the table next to the door. Please take it. You'll be saving me a trip to the police station."

They turned to see the locket lying on a small table about five feet from the door. As they walked toward the table, a man rushed in through the open door, grabbed the locket, and sprinted out of the barn.

"Who was that?" Barb asked.

That was Jeremy," John replied.

“Shall we pursue him?” Steve asked.

“No, we’d never catch him and besides, it’s his property. I’ll call Becky and let her know what’s happened.”

As John was dialing, the roar of a helicopter could be heard lifting off in the distance. Jeremy was gone.

John reached Becky and gave his report. She, in turn, told John that the reason Jeremy had not reported the theft to the authorities was that he had no proof of ownership. Fine Arts Insurers had not yet decided what to do, but at least they wouldn’t be paying out a \$2,000,000.00 claim!

Completing the call, the investigators left Sheldon and Boynton so they could return to their motel. The next day dawned bright and sunny making them wish they could stay in the Upper Peninsula for a while longer, but Becky already had another case awaiting them. They left Ishpeming on US-41 which was also State Route 45 N and started their long journey back to Lansing.

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Please respond to multiple choice questions with the letter of your choice.

- | | |
|-------------------------|--------------------------------|
| 01. a. Gerald R. Ford | 25. Huron |
| 02. c. Kentwood | 26. c. south |
| 03. 68 | 27. 8300 – 8500 (8400) |
| 04. b. 58 | 28. 1.1 – 1.3 feet (1.2 feet) |
| 05. a. 7.5' | 29. NE ¼ / NE ¼ / 21 / T1S-R4E |
| 06. 1:24,000 | 30. 44° |
| 07. 5 | 31. 048° - 052° (050°) |
| 08. 3 | 32. 3.22 – 3.32 (3.27) |
| 09. Standish & Sterling | 33. 636 - 639 |
| 10. 44° 02' 30" | 34. Hartwick |
| 11. 83° 57' 30" | 35. Huron |
| 12. b. 4 | 36. 5 |
| 13. Tittabawassee River | 37. 1.20 – 1.28 |
| 14. d. S-19 | 38. N 72° E (+/- 2°) |
| 15. 2141 | 39. Profile |
| 16. Livingston | 40. See |
| 17. 4947 | 41. note |
| 18. Howell | 42. below. |
| 19. secondary | 43. 46° 34' 38" +/- 05" |
| 20. 1996 | 44. 87° 39' 47" +/- 05" |
| 21. 859 | 45. 28 |
| 22. c. marsh | |
| 23. 5 | |
| 24. 1031 – 1039 | |

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The Mystery Man

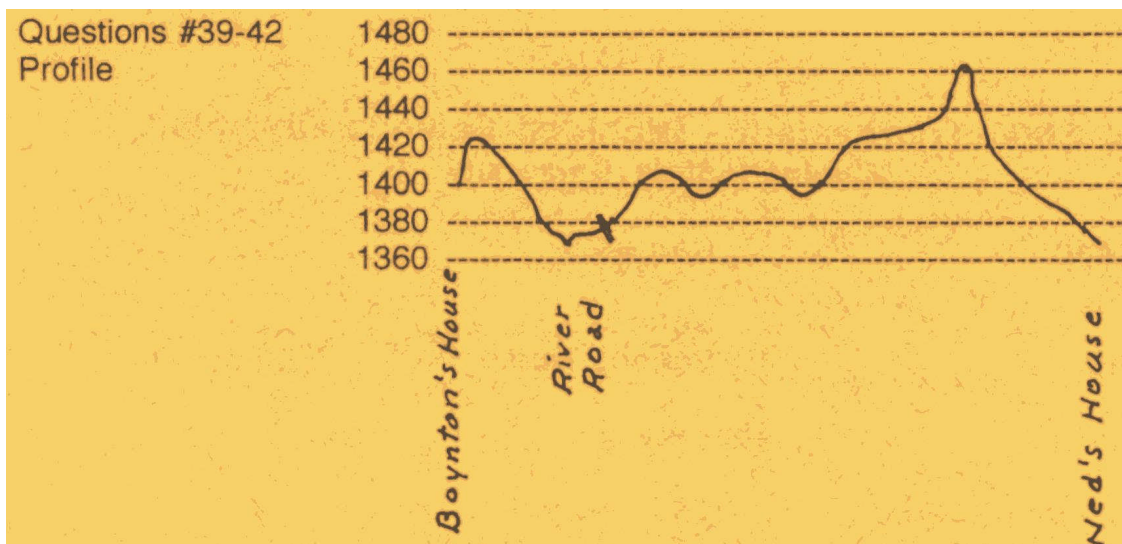
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For copies of the corresponding maps for this unit plus two other complete units – “To Catch a Thief” and “The Portrait,” visit <http://www.otherworlds-edu.com>

