

# SUMMARY OF EVIDENCE

Summarize the results of each of your tests. Write **yes** when the evidence and your observations suggest that a suspect was at the crime scene. Put a **?** when the evidence suggests that a suspect might have been at the scene, but you aren't sure. Leave blocks blank if there is **no** evidence that a suspect was there.

Remember that the evidence can only tell you who was at the crime, not who wasn't there.

	Rupert	Regina	Ralph	Ruth
Black Fiber				
White Fabric				
Paper				
Ink				
Powder (visual)				
Powder (Chemical)				
Soil				
Fingerprint				
Shoe Print				
Tools				

Which of the notorious Rotten Siblings committed the burglary at your crime scene?

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# WHODUNIT

## Detective Notebook

Names of Investigators:

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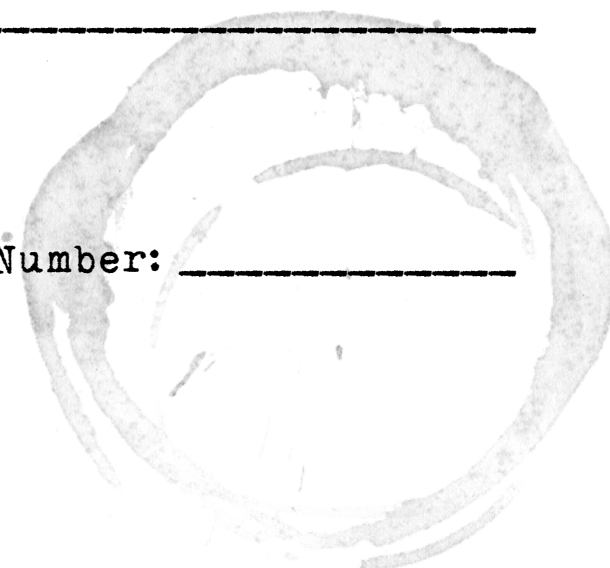
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Crime Scene Number: 

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## FIBERS

Eye-witnesses said they saw people wearing black clothing running away each crime scene. Torn black clothing was found in the garbage can at each suspects' home. Examine each suspect's sample carefully. Notice differences in texture and color, and how the method of weaving crinkles and twists the threads. Do the crosswise and lengthwise threads from a sample look different from one another? Sketch the threads from each suspect's sample.

Rupert	Regina
Ralph	Ruth

Place your crime scene sample onto the white paper, and separate the different types of threads. Compare each thread type in your sample to threads from the suspects' fabrics. Based on your observations, who was at the crime scene?

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## WHITE POWDERS CHEMICAL PROPERTIES

White powder was found at each crime scene. Each suspect had an open bag or box of a white powder in his car. Label five test tubes, one each for the suspects and one for the crime scene. Put a small pea-sized amount of each suspect's powder in the appropriate tubes, and a small pea-sized sample of crime scene powder in its tube.

1. Add 2 ml of water to tube. Stir gently. Did it fizz, dissolve, clump, sink, or do something else?
2. Add one drop of bromothymol blue indicator to each tube. Record any color you see.
3. If the solution turned BLUE add vinegar one drop at a time until the solution turns YELLOW. Record the number of drops of vinegar. Did the sample fizz or form bubbles?
4. Add one drop of iodine to each tube. Record the color you see.

	Crime Scene	Rupert	Regina	Ralph	Ruth
1					
2					
3					
4					

Based on your observations, who was at the crime scene?

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## WHITE POWDERS

White powder was found scattered at each crime scene. Each suspect had an open bag or box of a white powder in his car. Examine each suspect's powder. What shape are the particles? Are they crystals? Do they clump together? Are they dull or shiny? Sketch what you see.

Rupert	Regina
Ralph	Ruth

Compare those particles to those from the suspects. Based on your observations, who left the powder at the crime scene?

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## FINGERPRINTS

Thumb prints were found at each crime scene. Examine the thumb prints taken from each suspect. Can you find patterns unique to each? Draw an outline for each thumb, and mark those unique patterns on your drawings.

Rupert	Regina
Ralph	Ruth

Now examine the prints found at the crime scene. Do any of those thumbprints have the unique marks or structures you found on the suspects' prints? Based on your observations, who left those prints at the crime scene?

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## INK

A torn, wet note was found at each crime scene. Detectives found a different black pen at each suspect's home. Label the tape above each paper towel strip with the suspects' names. Place a generous spot of ink from each suspect's pen in the center of the corresponding strip. Put three drops of water directly onto each dot. Sketch what you see, noting colors. Compare the colors of ink that leached from each ink with the colors on the note.

Rupert	Regina	Ralph	Ruth

Based on your observations, whose pen was used for the note? Why?

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## WHITE FABRIC

Scraps of white fabric torn from garments were found at the crime scene. A torn item of white clothing was found in a trash can at each of the suspects' homes. Tags on the garments identified the fiber content:

Suspect	Fiber Content
Rupert	
Regina	
Ralph	
Ruth	

Samples from the suspects and the samples from the crime scenes were treated with the same dye. Examine the suspects' fabric and those from the crime scene, noting similarities and differences.

Based on your results, who was at the crime scene?

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## TOOLS

The door frames at each crime scene had been pried open using tools. Tools were found in each suspects' car. Examine each suspect's tool carefully. Notice what sort of marks each tool makes in wood. Sketch what you see.

Rupert	Regina
Ralph	Ruth

Examine the sample from the crime scene, and compare the marks and damage in your sample to the suspects' samples. Based on your observations, who pried the door open at the crime scene?

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## PAPER

A torn, wet note was found at each crime scene. Detectives found a different white paper at each suspect's home. Examine each paper. How do the colors compare? Are they different weights and textures? Look at the torn edges; how do the fibers compare? Describe the samples below.

Rupert	Regina
Ralph	Ruth

Which suspect's paper was used for the note? Why?

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## SHOE PRINTS

Clear shoe prints were found at each crime scene. Each suspect wore a different brand of shoe. Look at the photographs of the soles of each suspect's shoes. What is unique about the pattern of each?

Rupert	Regina
Ralph	Ruth

Examine the footprints found at the crime scene. You might have to use an ultraviolet (UV) light to see them. Based on your observations who walked through the crime scene?

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## SOILS

Muddy footprints were found at each crime scene. The suspects' shoes were covered with soil. Examine the soil samples scraped off each suspect's shoes. Notice differences in texture and color. Sketch and describe each soil.

Rupert	Regina
Ralph	Ruth

Place your crime scene soil sample onto the white paper. Compare this soil to the suspects' soils. Based on your observations, who was at the crime scene? Why?

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