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Toolmark Examination Laboratory Exercises

There have been a rash of burglaries occurring in the city. Police have finally caught the prime suspect. When they caught him, he had a box of tools that were suspected to have been used in the crime spree. Along with the box of tools, the police submitted the items of evidence from the crime scene. The scenario of each crime scene is listed below.

Your job is to determine if any of the tools submitted could have made the marks on the evidence items. To do that, measure the class characteristics of the tools and the toolmarks on the evidence items. Document the class characteristics of each and use them in your analysis.

**Item #1**. A house in a new development was under construction. The copper pipe was removed. It is believed that the suspect stole the copper to sell for scrap at the local recycling yard. The police recovered a section of the pipe from the house with suspected toolmarks on it. It appears that a tool was used to hold the pipe when it was cut. The police want to know if any of the tools submitted could have made the marks on the copper tubing. Justify your answers with a description of how you came to your conclusion.

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**Item #2.** A different house in the same development had some of the aluminum siding removed. It is believed that the suspect also stole that to sell for scrap at the local recycling yard. In order to steal it, the suspect used a hammer to knock the aluminum siding off the house. The police have removed a section of the aluminum siding from the house with toolmarks for analysis by you.
 The police want to know if any of the tools submitted could have made the marks on the aluminum siding. Justify your answers with a description of how you came to your conclusion.

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**Item #3.** The house in Item #2 was broken into. The suspect used a tool to get leverage to turn the doorknob. The police have removed the doorknob from the house for analysis by you.
The police want to know if any of the tools submitted could have made the marks on the doorknob. Justify your answers with a description of how you came to your conclusion.

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**Item #4.** A shed in the back yard of the house from Items #2 and #3 was also broken into. During the attempt to break in, the suspect used two different tools to gain access. In this submission, the police collected the hasp for toolmark analysis. The police want to know if any of the tools submitted could have made the marks on the hasp. Justify your answers with a description of how you came to your conclusion.

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**Item #5.** The hasp latch from the above mentioned shed was also attacked by a tool during the break-in. The police want to know if any of the tools submitted could have made the marks on the hasp latch. Justify your answers with a description of how you came to your conclusion.

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