Assignment 1: You just bought a cargo of salvaged wood without any markings or ideas of what the wood is. You can get a lot more money if you properly identify the wood before reselling it. Using the internet you found this list of densities for different types of wood.

Type of wood	Density grams/cm^3
Balsa	**0.10 to 0.20 g/cm^3**
Pine	**0.35 to 0.45 g/cm^3**
Fir	**0.4 to 0.5 g/cm^3**
Oak	**0.6 to 0.7 g/cm^3**
Black Iron wood	**1.1 to 1.3 g/cm^3**

Procedure and materials

On the lines below describe each step of how you would go about identifying this unknown sample of wood. *Be sure to include what equipment is needed, what you are doing, and why you are doing it. (Worth 25 pts)* **Then perform your steps in the Laboratory.**

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Data Table (25 points)

Block Id:_____

	Tester Initials	Length Units:	Height Units:	Width Units:	Mass Units:
Trial 1					
Trial 2					
Trial 3					
Trial 4					
Average	--				

Calculations: (25 points) Remember to round all values to correct significant digits

The volume formula is_____

The average volume of Block# _____ is _____

The average mass of Block # _____ is _____

The density formula is _____

The average density of Block # _____ is _____

Conclusions: (25 points)

Based on ____ trials we have determined the density of Block # _____ to be_____. Comparing this value to the chart at the top of this lab we would conclude that Block _____ is probably _____.

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Error: _____

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Additonal Tests_____

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Additional Comments_____

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Assignment 2: You are a forensic metallurgist that has been brought it to determine the identity of some samples of rare metal taken from smugglers. Whether they are thrown in prison as gold smugglers, or let free as junk dealers depends on your identification of the metals.

Metal	Color	Reactivity	Density
Sodium	**White or silver**	**Explosive with water**	**0.97 g/cm^3**
Calcium	**White or silver**	**Rapid with water**	**1.5 g/cm^3**
Aluminum	**White or silver**	**Non-reactive**	**2.7 g/cm^3**
Tin	**White or silver**	**Non-reactive**	**7.3 g/cm^3**
Iron	**Grayish silver**	**Rusts in days**	**7.9 g/cm^3**
Brass	**Yellowish**	**Slowly tarnishes**	**8.4 to 8.7 g/cm^3**
Copper	**Reddish brown**	**Slowly tarnishes blue green**	**8.9 g/cm^3**
Gold	**Shiny yellow**	**Non-reactive**	**19.3 g/cm^3**

Procedure and materials 25pts

On the lines below describe each step of how you would go about identifying this unknown sample of metal that has an irregular shape *Be sure to include what equipment is needed, what you are doing, and why you are doing it. (Worth 20 pts)* **Then perform your steps in the Laboratory.**

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Data Table (25 points)

Cylinder # _____

	Tester Initials	Ending Volume. Units:	Start Volume Units:	Net Volume Units:	Mass Units:
Trial 1					
Trial 2					
Trial 3					
Trial 4					
Average	--	--	--		

Calculations: (25 points) Remember to round all values to correct significant digits

The net volume formula is_____

The average volume of Cylinder# _____ is _____

The average mass of Cylinder# _____ is _____

The density formula is _____

The average density of Cylinder # _____ is _____

Conclusions: (25 points)

Results: _____

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Error: _____

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Additonal Tests_____

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Recommendation to court: _____

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