The table below lists the density for different metals.

Metal	Density (g/cm³)
Platinum	21.4
Gold	19.3
Silver	10.5
Copper	8.9
Zinc	7.1
Aluminum	2.7

A. Look at the density you computed for the block of metal. What was the block of metal most likely made of?

Answer: _____

Explain your answer.

B. The density of the crown was found to be 12.0 g/cm³. What would you report to the king about what metal or mixture of metals the jeweler used to make the crown?

End of Metal Crown section.

A: Codes for Identifying Metal in Block

Note: To receive credit, responses must identify gold AND give an explanation based on density. Responses that identify gold with no or incorrect explanation are given Code 70. It is possible that a different metal or metal(s) may be identified based on an incorrect density computation in the previous question. These types of responses may be given Code 19, provided the explanation is reasonable based on the computed density.

Code	Response	Item: S032713A
	Correct Response	
10	GOLD with an explanation based on correct density computed in previous question (19.2 g/cm^3). *Examples:* *Gold. Because it had the closest density.* *Gold. The density is the same.*	
19	Other correct	
	Incorrect Response	
70	GOLD with no explanation or incorrect explanation that is NOT based on density. *Examples:* *Gold. Because that is what crowns are always made of.*	
71	SILVER (alone or mixed). [Confuses density of crown with density of the metal block.] *Examples:* *It is mostly silver because the density is 12 and that's the closest one.*	
79	Other incorrect (including crossed out/erased, stray marks, illegible, or off task)	
	Nonresponse	
99	Blank	