A Golden Crown ?

The King asks Archimedes if his crown is made from pure gold.

He knows that the crown is either pure gold or it may have some silver in it.

Archimedes figures out that the volume of the crown is 125 cm^3 and that its mass is 1.8 kilograms.

He also knows that 1 kilogram of gold has a volume of about 50 cm^3 and 1 kilogram of silver has a volume of about 100 cm^3.

1. Is the crown pure gold? Explain how you know.

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2. If the crown is not pure gold, then how much silver is in it?
    Show all your work.

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