

The king's crown

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$$V = \pi r^2 h = \pi(25 \text{ cm}^2)(1.1 \text{ cm}) = 86.4 \text{ cm}^3$$

Therefore, the density is:

$$\rho = \frac{m}{V} = \frac{1650 \text{ gm}}{86.4 \text{ cm}^3} = 19 \frac{\text{gm}}{\text{cm}^3}$$

The crown was made of gold.