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(a)

Distinguish between *precision* and *accuracy*.

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.....[2]

(b)

A solid iron cube of side 20 mm has a mass of  $6.3 \times 10^{-2}$  kg. One mole of iron atoms has a mass of  $5.6 \times 10^{-2}$  kg.

(i)

Define the *mole*.

.....

.....

..... [1

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(ii)

Determine the number of iron atoms in the cube.

number = ..... [1]

(iii)

Estimate the radius of an iron atom using the answer from (b)(ii).

radius = ..... m [2]

[Total: 6]

