

1

(a)

Distinguish between *precision* and *accuracy*.

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.....

.....

.....

.....

.....[2]

(b)

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

(i)

Define the *mole*.

.....

.....

.....[1

]

(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]

