

Quiz 12.2 – Unit Cells

Name: _____

Question 1

At room temperature, iron has a body-centered cubic structure. Iron atoms have a radius of 126 pm

- Give the coordination number of the iron atoms
- Find the length of the edge of a unit cell
- Estimate the density of iron metal. (The observed value is $7.87\frac{\text{g}}{\text{cm}^3}$)

Question 2

Lead has a face-centered cubic structure, and a density of $11.34\frac{\text{g}}{\text{cm}^3}$

- Give the coordination number of the lead atoms
- Find the length of the edge of a unit cell
- Estimate lead's atomic radius. (The observed value is 175 pm)

The Mortician in San Francisco

By Randall Mann

This may sound queer,
but in 1985 I held the delicate hands
of Dan White:
I prepared him for burial; by then, Harvey Milk
was made monument—no, myth—by the years
since he was shot.

I remember when Harvey was shot:
twenty, and I knew I was queer.
Those were the years,
Levi's and leather jackets holding hands
on Castro Street, cheering for Harvey Milk—
elected on the same day as Dan White.

I often wonder about Supervisor White,
who fatally shot
Mayor Moscone and Supervisor Milk,
who was one of us, a Castro queer.
May 21, 1979: a jury hands
down the sentence, seven years—

in truth, five years—
for ex-cop, ex-fireman Dan White,
for the blood on his hands;
when he confessed that he had shot
the mayor and the queer,
a few men in blue cheered. And Harvey Milk?

Why cry over spilled milk,
some wondered, semi-privately, for years—
it meant “one less queer.”
The jurors turned to White.
If just the mayor had been shot,
Dan might have had trouble on his hands—

but the twelve who held his life in their hands
maybe didn't mind the death of Harvey Milk;
maybe, the second murder offered him a shot
at serving only a few years.
In the end, he committed suicide, this Dan White.
And he was made presentable by a queer.