Written Assignment 4

Daniel Detore
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1.a

32 is not a square square-free number. It is divisible by 4, which is 2^2.

1.b

This is an invalid way to use the superset operation. John is trying to compare an integer with a set, which is not possible. He should have written:

$$P(\{17, 19, 22, 26, 30\}, \{30\})$$

2

The given set U is the set of all perfect square numbers.

2.a

Yes. One such set is $B = \{0, 1, 4, 9, 16, 25, 36, 49\}$. $|B| = 8$, so $|B| > 7$.

2.b

Yes. One such set is $B = \{64\}$. In this case, $B \subseteq U$ and $10 \leq 64 \leq 100$.