Complex Conjugation

Quiz: Complex Conjugation.
If $\bar{z} = -z$, what does that tell us about the value of $z = a + bi$?

Choices:

a) $z$ is purely imaginary.
b) $z$ is real.
c) $z$ has length 1.
d) $z = 0$.
e) None of the above.

Pick what you think is the correct choice and then look at the answer.