Quiz 3

Try to get each questions fully right — likely no partial credit will be given.

1. Define what it means for a language L to be **recursively enumerable** (aka, Turing acceptable).

2. Clearly state the **Church-Turing thesis**.

3. The Turing-decidable languages are closed under complement. $\boxed{\textbf{True}}$ $\boxed{\textbf{False}}$

4. Any Turing-acceptable language is Turing-decidable. $\boxed{\textbf{True}}$ $\boxed{\textbf{False}}$

5. If M is a TM and $L = L(M)$ and there is some input x such that M, on input x, eventually visits a configuration C more than once, then M does not decide L. $\boxed{\textbf{True}}$ $\boxed{\textbf{False}}$

6. If M is a TM and $L = L(M)$ and there is some input x such that M, on input x, eventually visits a configuration C more than once, then L is not decidable. $\boxed{\textbf{True}}$ $\boxed{\textbf{False}}$

7. Turing machine can accept infinite languages by virtue of having an infinite number of states. $\boxed{\textbf{True}}$ $\boxed{\textbf{False}}$

8. Deterministic and probabilistic Turing Machines accept the same class of languages.
$\boxed{\textbf{True}}$ $\boxed{\textbf{False}}$