

WEEK 9: LISTENING**I. True (T) or False (F)?**

1. _____ Mathematicians don't enjoy solving puzzles.
2. _____ Theoretical mathematicians use equations to create new theories.
3. _____ Applied mathematicians don't work in industry and government.
4. _____ Applied and theoretical mathematics areas often overlap.
5. _____ Most people with a degree in mathematics work in information technology.
6. _____ To be a teacher in a school you don't need a degree nor a teaching credential.

II. Fill in the gaps.

If you enjoy solving puzzles and have a good head for 1) _____, you might be interested in a career as a mathematician. These workers use 2) _____ to solve both academic and real-life problems.

Theoretical mathematicians use equations to develop new 3) _____, disprove existing mathematical theories, or create new ones. They may develop 4) _____ to solve problems emerging from science and 5) _____ fields. They often work for research firms or teach math and 6) _____ research at colleges and universities.

Applied mathematicians address an almost endless variety of problems, from making aircraft more aerodynamic, to programming 7) _____ for a video game, to designing and deciphering encryption systems for the military and financial industries. Applied mathematicians work in industry and government, dealing with 8) _____, pharmaceuticals, space exploration, and more.

Despite the differences between applied and theoretical mathematics, areas often overlap. Many mathematicians, particularly those in government or private industry, use both applied and theoretical 9) _____ in their job duties.

Mathematicians, however, are a relatively small occupation. Most people with a degree in mathematics, or who develop mathematical theories and models, work in related fields and professions, such as 10) _____.

Some become math teachers in a middle school or high school. This typically requires a 11) _____ degree and a teaching credential. Government jobs require at least a bachelor's degree in math. For private industry jobs, a master's degree or Ph.D. is usually expected, and in academia, a 12) _____ is needed.

So, is this challenging career in a fast-growing field the right choice for you? You do the math.