

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.