1. Besides an equal sign, a differential equation always has a(n) __**derivative**__.

2. A mathematical model describes some ___**physical**___ process.

3. The model from 1.1 used to describe an object in free fall takes into account gravity

   and __**air resistance**__.

4. The model of predator and prey from section 1.1 assumes that the _**predator**_

   kills the __**prey**__ at a constant rate.

5. If the dependent variable depends on more than one independent variable, then the

   differential equation has a(n) ___**partial**___ derivative.