

**TASK 1.2.1: DEFINITION OF FUNCTION****Solutions**

The *American Heritage Dictionary* defines **function** as something closely related to another thing and dependent upon it for its existence, value, or significance. The words function and depends can be used interchangeably.

Independent – Not subject to control by others, self-governing.

Dependent – Relying on or subject to something else for support.

**Directions**

Examples of Function – Write sentences that represent a function. Determine the independent and dependent parts. Include several different words such as depends, determines, and ‘is a function of’ in your statements.

1. How much money I make depends on the number of hours I work
  - a. I control the hours I work – independent
  - b. The money depends on the hours – dependent
- 2.
3. Answers will vary as participants create their own sentences.
- 4.
- 5.
- 6.

**Teaching notes**

There are several ways that a function can be written as a statement. Be sure to address a variety of possibilities. These include but are not limited to using terms such as depends, determines, hinges on, establishes, decides, causes and effects.

Important concepts are identifying the two quantities involved and determining the dependent and independent relationships.

Many times, parts of this statement can be interchanged. For example, if discussing gas in a car and the amount of money you have, either statement of a function is accurate but the dependency changes:

- The amount of money I have depends on how much gas I put in my car.
- How much gas I put in my car depends on how much money I have.

Discuss with students that sometimes the situation above exists; however, the question statement will help decide the dependency. Don't let this become an issue that distracts students from the concept of independent and dependent quantities.

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