Depth-First Search Worksheet

Name:_____

There are four types of edges that can result from doing a depth-first search of a graph. For each one, give the name and answer the following questions. Start with the obvious one.

1. **A** _____ **edge** is _____

   (a) When can/can't it occur?

   (b) How do you determine if an edge is of this type?

   (c) Give an example of a problem/algorithm for which this type of edge is important.

2. **A** _____ **edge** is _____

   (a) When can/can't it occur?

   (b) How do you determine if an edge is of this type?

   (c) Give an example of a problem/algorithm for which this type of edge is important.

3. **A** _____ **edge** is _____

   (a) When can/can't it occur?

   (b) How do you determine if an edge is of this type?

   (c) Give an example of a problem/algorithm for which this type of edge is important.

4. **A** _____ **edge** is _____

   (a) When can/can't it occur?

   (b) How do you determine if an edge is of this type?

   (c) Give an example of a problem/algorithm for which this type of edge is important.