Database Design
5-2: Relationship Types
Practice Solutions
Vocabulary

Directions: Identify the vocabulary word for each definition below.

One-to-one (1:1)	A relationship where each record in Table A can be related to one, and only one, record in Table B, and each record in Table B relates to one, and only one, record in Table A.
One-to-many (1:M)	A relationship where a single record in Table A can be related to one or more records in Table B, but a single record in Table B can only be related to one record in Table A.
Many-to-many (M:M)	A relationship in which many records in one table match many records in another table
Redundant	Unnecessarily repetitive

Try It / Solve It

1. Identify the relationship types of the statements below

   Solution:

Type	Statement
One-to-many	A snowboard instructor may instruct one or more snowboarders
One-to-one	A bicycle may be owned by a child
Many-to-many	Classroom crayons may be used by students in a classroom
One-to-one	A passport belongs to a person
One-to-one	A female elephant gives birth to an elephant

2. Provide two examples for each relationship type.

Relationship Type	Example
One-to-one	
One-to-one	
One-to-many	
One-to-many	
Many-to-many	
Many-to-many	

Solution: Answers will vary.

3. Draw an entity relationship diagram to represent the following:

   a. Each CLUB must be assigned to one and only one DEPARTMENT

   b. Each DEPARTMENT may be responsible for one or more CLUBs

   c. Each STUDENT may join one or more CLUBs

   d. Each CLUB may be composed of one or more STUDENTs

   Solution: You can use existing clubs in your school as an example. If they don't belong to a department, ask the students which academic department they "could" belong to, if that was a business rule. See if the majority of the class has modeled the M:M relationship correctly. You may want to call attention to it, and say that they will learn more about it in the next lesson.