1. State the rules for creating data names.

**Names must be between 1-30 characters**

**Names must include at least one alphabetic character**

**Names cannot include spaces replace space with hyphen**

**Names cannot start or end with a hyphen**

**Names can consist of A-Z, a-z, 0-9, hyphen**

**Ideally names should be unique within a program**

**Reserved words are not permissible**

**Be Descriptive**

1. What is the purpose of the PICTURE clause?

**It provides a method of specifying the characteristics of data items**

**It provides information about the type of data stored and the size of the storage area for the item**

1. What symbol represents the following in a PIC clause?

X **alphanumeric letters/numbers/symbols**

A **alphabetic- letters/spaces**

9 **numeric**

V **decimal point- implied**

S **signed- if data could be negative it holds the -**

1. Explain the difference between Alphanumeric and Numeric Literals.

**Alphanumeric – can be letters and numbers - used for output**

**05 FLDA PIC XX VALUE ’RR’.**

**05 FLDB PIC X(6) VALUE “YES”.**

**Numeric are numbers that can be used for math but must be formatted to display**

**As output**

**05 FLDA PIC99 VALUE 23.**

**05 FLDB S99V99 VALUE -7.13.**

1. What is the purpose of the FILLER clause?

**A filler clause will show that data is present, but you have no interest in accessing it**

1. Why would you use the VALUE clause?

**If you want to see the value in one or more data item**

**Initialize variables**

1. Give examples of the figurative constants.

**Spaces**

**Zeros**

**Low-Values**

**Hight-Values**

**All “*literal*”**

1. Give the characteristics of an elementary item. (Look throughout the chapter)

**Elementary Items cannot be divided further**

**Always have a PICTURE clause**

**Always Alphanumeric Value**

1. Give the characteristics of a group item. (Look throughout the chapter)

**Group Items can be divided into one or more elementary items**

**Never has a PICTURE clause**

1. Identify whether the following are valid or invalid. Identify the rule violated if invalid.

Variable Names:

99 Invalid

-ABC Invalid

99-ABC Valid

XYZ-1 AB Invalid

BOATING-SEASON-IS-COMING Valid

PICTURE Invalid

RM-BANK-ACCT- Invalid