

* generating random sample from population with specified correlation.

*note -- not all samples will have exactly the desired correlation.

```
compute x1 = rv.normal(0,1).
```

```
compute x2 = rv.normal(0,1).
```

```
compute y = (.8 * x1) + ( sqrt(1-.64) * x2 ) .
```

```
exe.
```

```
corr x1 y.
```

*generating sample data with specified correlation.

*must start with uncorrelated variables.

*compute random variables.

```
compute v1 = rv.normal(0,1).
```

```
compute v2 = rv.normal(0,1).
```

```
exe.
```

*submit them to PC & save PC scores -- which will be uncorrelated.

```
FACTOR
```

```
  /VARIABLES v1 v2
```

```
  /CRITERIA FACTORS(2) ITERATE(25)
```

```
  /EXTRACTION PC
```

```
  /ROTATION NOROTATE
```

```
  /SAVE REG(ALL)
```

```
  /METHOD=CORRELATION.
```

*now apply the formula using the uncorrelated factor scores - to generate "y".

```
compute y = (.8 * FAC1_1) + ( sqrt(1-.64) * FAC2_1 ) .
```

```
exe.
```

```
corr FAC1_1 y.
```

*remember to rescale the mean and std of your created variables.