Scenario 1

The Georgia Early Childhood Study 2001-2004 was designed to evaluate the change in children’s cognitive and academic skills associated with their personal characteristics and experience. This figure shows the change in children’s Peabody Picture Vocabulary Test Scores over time for children’s whose parents did and did not receive TANF support (the Federal subsidy known at CalWORKS in California).

This graph is best described as a

- [ ] Pie graph
- [ ] Bar graph
- [ ] Histogram
- [ ] Line graph
- [ ] Frequency polygon

This analysis includes two predictor variables and one criterion variable. Define the following for these variables:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Conceptual Definition</th>
<th>Operational Definition</th>
<th>Measurement Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predictor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predictor</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Criterion</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Scenario 2

The Economic Policy Institute wanted to see if recent policy and legislation about preschool teacher preparation had increased the proportion of preschool teachers with Bachelor's degrees. They found the following:

The relationship between year and the % of teachers with a BA is best described as:
- [ ] Linear
- [ ] Curvilinear
- [x] None

The relationship between year and the % of teachers with a BA is best described as:
- [ ] Positive
- [ ] Negative
- [ ] None/Cannot be determined

The relationship between year and the % of teachers with a BA is best described as:
- [ ] Strong
- [ ] Moderate
- [x] Weak

Based on this picture, what % of teachers would you expect to have a BA in 2010?

These variables use which measurement scale?
Scenario 3

Burchinal and Cryer (2003) were interested in whether the association between early childhood program characteristics and child outcomes would vary for different ethnic groups. To assess this, they examined the nature of teacher-child relationships using a combination of the ECERS, ECOF, CIS, and AIS and child outcomes using the PPVT, WJ-R, and two measures of the Child Behavior Inventory.

<table>
<thead>
<tr>
<th></th>
<th>PPVT receptive language ($r$)</th>
<th>WJ-R school readiness ($r$)</th>
<th>CBI pro-social ($r$)</th>
<th>CBI behavior problems ($r$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>White children</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive caregiving</td>
<td>.28***</td>
<td>.18**</td>
<td>.07</td>
<td>−.05</td>
</tr>
<tr>
<td>Teacher–child ethnic match</td>
<td>.07</td>
<td>−.02</td>
<td>.06</td>
<td>−.03</td>
</tr>
<tr>
<td><strong>African-American children</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive caregiving</td>
<td>.32***</td>
<td>.13</td>
<td>.11</td>
<td>−.05</td>
</tr>
<tr>
<td>Teacher–child ethnic match</td>
<td>−.31***</td>
<td>−.11</td>
<td>.02</td>
<td>.08</td>
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<tr>
<td><strong>Hispanic children</strong></td>
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<td></td>
</tr>
<tr>
<td>Positive caregiving</td>
<td>.41***</td>
<td>.32</td>
<td>.02</td>
<td>.30</td>
</tr>
<tr>
<td>Teacher–child ethnic match</td>
<td>−.22</td>
<td>.14</td>
<td>−.19</td>
<td>.16</td>
</tr>
</tbody>
</table>

** $p < .01$.
*** $p < .001$.

Describe the nature of the relationship between positive caregiving and school readiness for the different ethnic groups:

Which of the correlations in the above table are statistically significant?
Scenario 4

The Center for Law and Social Policy (CLASP) examined the difference in child care arrangements between children with immigrant and native-born parents, and found the following:

**Figure 7: Child Care Arrangements of All Children Ages Three to Five**

![Bar graph showing child care arrangements]

- **Children of Immigrants**: 43%, 17%, 7%, 2%.
- **Children of U.S.-born Citizens**: 29%, 21%, 8%, 4%.

*Difference is not statistically significant*

**Source**: Urban Institute, 2002 National Survey of America’s Families

The variable “type of child care” uses what scale of measurement? ____________________________

What measure(s) of central tendency can be used to describe each group’s use of child care? __________________________________________

Which of the following terms can be used to describe this graph?

- [ ] Pie graph
- [ ] Bar graph
- [ ] Line graph
- [ ] Frequency graph

How many variables are represented in this graph, and how are they represented?