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| **Graph Self-Efficacy Beliefs and Graph Attitudes (GSEBGA) Scale**Please read each of the following items and tick one of the options that best describes your opinions to indicate what you think about the graphs. |
|  | **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| 1. I can’t formulate my ideas on graph questions.
 | **□** | **□** | **□** | **□** |
| **2.** Graph questions in exams always worry me more than other questions. | **□** | **□** | **□** | **□** |
| **3.** Graphs make it easier to learn the subjects in science courses.  | **□** | **□** | **□** | **□** |
| **4.** I can’t understand the graphs that involve more than two variables. | **□** | **□** | **□** | **□** |
| **5.** I would like to learn new information about graphs.  | **□** | **□** | **□** | **□** |
| **6.** I can’t make analyses by looking at the numbers in graphs.  | **□** | **□** | **□** | **□** |
| **7.** I would like the numerical values in exams to be given in graphs rather than to be given in the text. | **□** | **□** | **□** | **□** |
| **8.** When I see graph questions, I feel that I can’t solve them. | **□** | **□** | **□** | **□** |
| **9.** Studying the graphs on books attracts my attention. | **□** | **□** | **□** | **□** |
| **10.** I feel myself insufficient in interpreting the graph questions.  | **□** | **□** | **□** | **□** |
| **11.** I would have trouble when expressing data values in graphs. | **□** | **□** | **□** | **□** |
| **12.** I enjoy working on graph questions.  | **□** | **□** | **□** | **□** |
| **Notes for future Scale users:****Factor 1 (GSEB):** Item 1, Item 2, Item 4, Item 6, Item 8, Item 10, Item 11**Factor 2 (GA):** Item 3, Item 5, Item 7, Item 9, Item 12**Negative Items to be Reverse Coded:**  All items in the GSEB factor |

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| **Graph Literacy Perceptions according to Graph Types (GLPGT) Scale*** This scale is designed to get your views for each of the **Line Graphs**, **Bar Graphs**, and **Pie Charts** separately.
* Firstly, determine how you feel about the **Line Graphs**, **Bar Graphs**, and **Pie Charts** for each of the four items in the scale, according to the below **Disagreement/Agreement** categories with **1-4 number codes**.
* Then, for each item, mark the **number code** (independently for each graph type) of the **Disagreement/Agreement** category, which best expresses your opinion about the **Line Graphs**, **Bar Graphs**, and **Pie Charts**.
 |
| **1:** Strongly Disagree**2:** Disagree**3:** Agree **4:** Strongly Agree |
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| **Line Graph** |  | **Bar Graph** |  | **Pie Chart** |
| * I can display the given data correctly as a graph.
 | (1) | (2) | (3) | (4) |  | (1) | (2) | (3) | (4) |  | (1) | (2) | (3) | (4) |
| * I can correctly interpret the graphs.
 | (1) | (2) | (3) | (4) |  | (1) | (2) | (3) | (4) |  | (1) | (2) | (3) | (4) |
| * I like to present data in graphs.
 | (1) | (2) | (3) | (4) |  | (1) | (2) | (3) | (4) |  | (1) | (2) | (3) | (4) |
| * I can easily find the correct responses to graph questions.
 | (1) | (2) | (3) | (4) |  | (1) | (2) | (3) | (4) |  | (1) | (2) | (3) | (4) |

**Important Note:** For each of the following four items, you are asked to give 3 separate answers, each independently indicating your thoughts about the **Line Graphs**, **Bar Graphs**, and **Pie Charts.** |