Building Our Bridge to Fun Pre-Assessment

**Answer Key**

Read the following questions, and for each one circle the best choice as accurate as possible:

1. A *pulling* force that acts to *lengthen* an object is defined as
   a. Compression force
   b. **Tension force**
   c. Shear force
   d. All above
   e. None of the above

2. A *pushing* force that acts to *shorten* an object is defined as
   a. **Compression force**
   b. Tension force
   c. Shear force
   d. All above
   e. None of the above

3. Which of the following loads are to be consider in a bridge design?
   a. Weigh of the bridge
   b. Snow load
   c. Wind load
   d. Traffic and people load
   e. **All above**

In real life, which of the following combination of materials is useful to have a bridge that works under compression and tension?

a. Stone and water
b. **Concrete and steel**
   c. Glass and plastic
   d. Steel and ice
   e. All above
<table>
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<tr>
<th>Statement</th>
<th>Agree a lot</th>
<th>Agree</th>
<th>Disagree</th>
<th>Disagree a lot</th>
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<td>Engineers should know material properties to design and build bridges and other constructions</td>
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<td>Math is important in <em>my</em> everyday life</td>
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<td>Robots can help design and build bridges</td>
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