Teacher Answer Key

Case Study

1. Alphabetical order would have scattered Daniel and Marcus apart, treating names as data rather than lives. The 'meaningful adjacencies' system let placement carry relationships — friendship, in this case — so the arrangement itself became part of the memorial's meaning.
2. The mathematics: an algorithm had to satisfy over a thousand adjacency requests while grouping nearly three thousand names by company and flight — a genuine optimization puzzle. The mourning: each constraint was a human bond like the Sunday calls, so solving the puzzle correctly meant honoring grief.

Multiple Choice

1. A
2. C
3. B

Matching

1-C, 2-D, 3-B, 4-E, 5-A

Fill-in-the-Blank

1) footprints, 2) feet, 3) Survivor

Short Answer (Sample Responses)

Q1: The old towers' lightweight steel let fire-softened floors trigger collapse, and narrow stairwells slowed escape. The new tower answers point by point: a hardened concrete core protects stairs and systems, wider pressurized stairwells speed evacuation, a dedicated stairway serves firefighters, and redundant systems prevent single-point failures.

Q2: Technically, an algorithm had to satisfy more than a thousand adjacency requests while grouping names by company, flight, and rescue unit — a genuine optimization puzzle. Humanly, every constraint represented a relationship, so the solution had to honor grief, not just efficiency.

Q3: Answers will vary. Strong responses note the tree is alive and changing — scarred old bark giving way to new growth — so it models survival and recovery rather than loss, and its seedlings extend the memorial outward to other grieving communities.