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| **1. Graph Theory**  Draw the directed graph with the set of vertices {A, B, C, D, E} and the set of edges {AB, DA, BC, AE, BE, CA, DE, EC, BD, CE}. | **1.** |
| **2. Graph Theory**    Draw the adjacency matrix  for the directed graph at  the right. | **2.** |
| **3. Digital Electronics**    Simplify the Boolean  expression representing  the digital circuit at  the right. | **3.** |
| **4. Digital Electronics**    How many ordered triples make the Boolean expression for this  circuit FALSE? | **4.** |
| **5. What Does This Program Do?**  What is the output when this program is run?  A = “NARRAGANSETTINDIANS”: B = “”: C = “”  for x = 0 to len[A] ̶ 1  if A[x] != “T” && A[x] > “H”  B = B + A[x]  end if  next x  for y = 0 to len[B] ̶ 1  if B[y] != “N” && B[y] != “S”  C = C + B[y]  end if  next y  print C[:1] + C[1:]  end | **5.** |