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| 1. We start from A and draw the tree formed by the edges we can reach from A. The nodes are labelled with the distance from A. |  |
| 2. The next step is to extend the trees to all the nodes we can reach from B, C, and D, and label them with the distances from A.<br>• From B: F(4+4 = 8) and D(4+1 = 5)<br>• From D: G(7+7 = 14) and E(7+2 = 9)<br>• From C: D(3+3 = 6) and E(3+5 = 9) |  |
| 3. In this new column of nodes, D and E appear twice.<br>• We only need the one with the shortest distance from A, so we delete D(6) and E(9). *(You could just cross them out rather than deleting them.)* |  |
| 4. Next extend the tree from F, D, and E in the same way. G is the finishing point so that branch is not extended. |  |

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The shortest distance from A to G is 9, and the path is ABDEG.

**Students should be encouraged to draw the trees step by step to clearly communicate their thinking.**