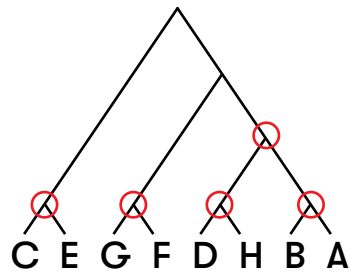
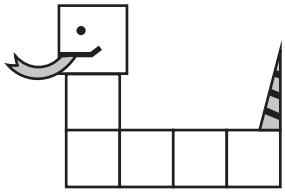


# Educator Answer Key

Red circles indicate where branches may be flipped without affecting logic of tree (commutative property).

## SNAKE

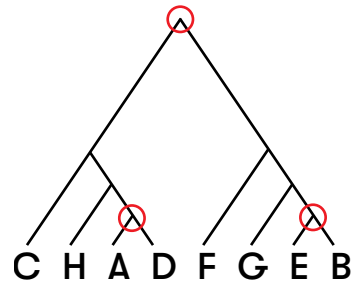
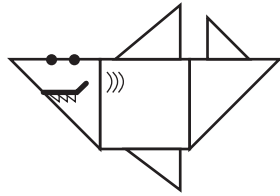


There is one possible solution, with many potential presentations (commutative property).

All correct solutions will have C&E for the first pair and G&F for the second pair.

The second half of the tree will have D&H paired and B&A paired, in either order.

## SHARK

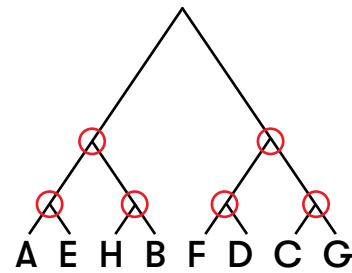
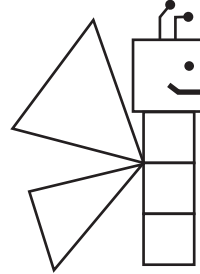


There are six different solutions.

All correct solutions will have either C-H-A-D or C-H-D-A on one side of the tree.

The other side of the tree will always have F, G, E, and B. The individuals F, G, and B may be swapped interchangeably.

## BUTTERFLY

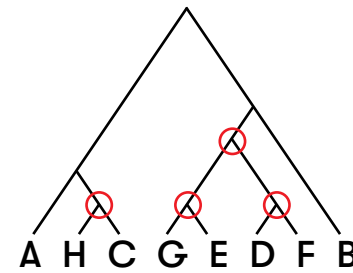
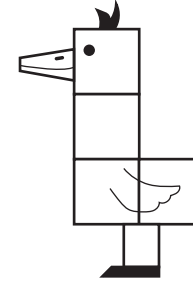


There is one possible solution, with many potential presentations (commutative property).

One side of the tree will have A&E paired and H&B paired, in either order.

Similarly, the other side of the tree will have F&D paired and C&G paired, in either order.

## DUCK



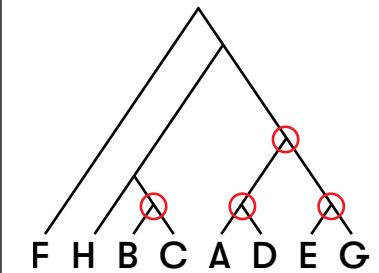
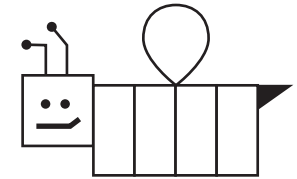
There are four different solutions.

All correct solutions will have A, H, and C together. The individuals A and C may be swapped interchangeably.

The second part of the tree will have G&E paired and D&F paired, in either order. The individuals E and B may be swapped interchangeably.

All correct solutions will have B in the final position.

## BEE



There are two different solutions.

All correct solutions will have F in the first position. H, B, and C will be in the next set; the individuals H and B may be swapped interchangeably.

The second half of the tree will have A&D paired and E&G paired, in either order.