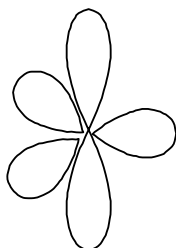


## ConcepTest on hybridization



How many orbitals are shown above?

1. one
2. three
3. four
4. five

*Correct Answer: Choice 3 (four orbitals) and Choice 4 (five orbitals)*

*Comment to Instructor: The sketch can be viewed as five  $sp^3d$  orbital, or three  $sp^2$  orbitals and one  $p$  orbital, adding up to four total. It is not a bad idea to sometimes provide more than one correct answer to choose from. It teaches students to think critically and not try to guess what the instructor wants.*

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If an atom is utilizing  $sp^2$  hybrid orbitals, how many unhybridized  $p$  orbital(s) does it have?

1. one
2. two
3. three
4. four

*Correct Answer: 1. one*