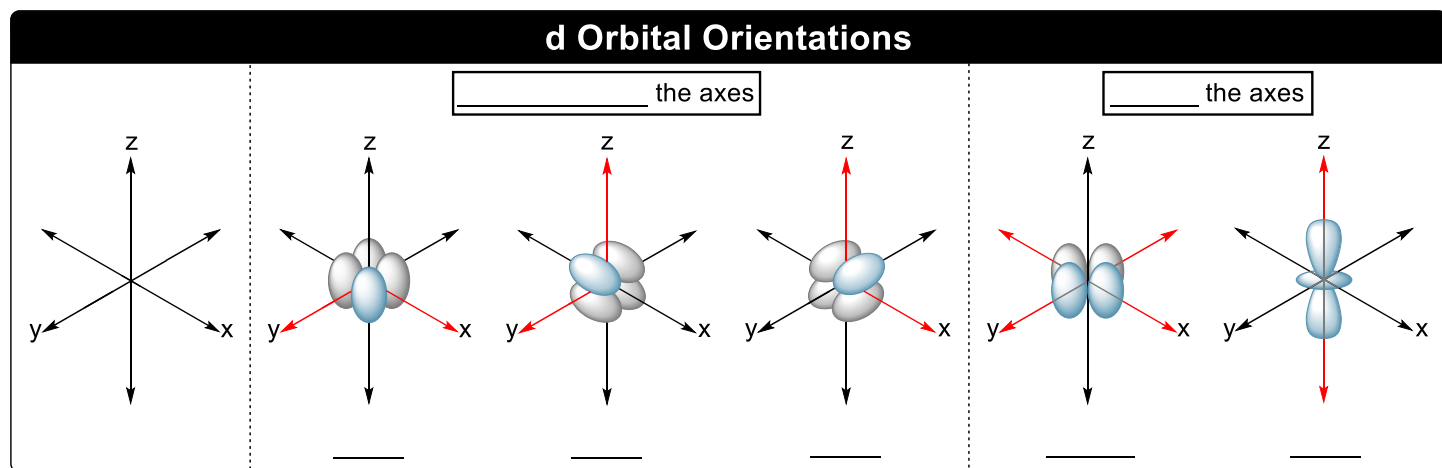


CONCEPT: ORIENTATIONS OF D ORBITALS

- **Recall:** An orbital is the area around the nucleus where an _____ is most likely to be found.
- There are _____ d orbitals with different **orientations**.
 - **Orientations** can be _____ into two **sets**: 1) In-between the axes, 2) On (along) the axes.



EXAMPLE: An electron in which of the following orbital is the most likely to be found **along** the x and y axes?

- a) d_{xy}
- b) d_{yz}
- c) d_{xz}
- d) $d_{x^2-y^2}$
- e) d_{z^2}

PRACTICE: In which of the following orbitals an electron is the most likely to be found along the z axis?

- a) d_{xy}
- b) d_{yz}
- c) d_{xz}
- d) $d_{x^2-y^2}$
- e) d_{z^2}