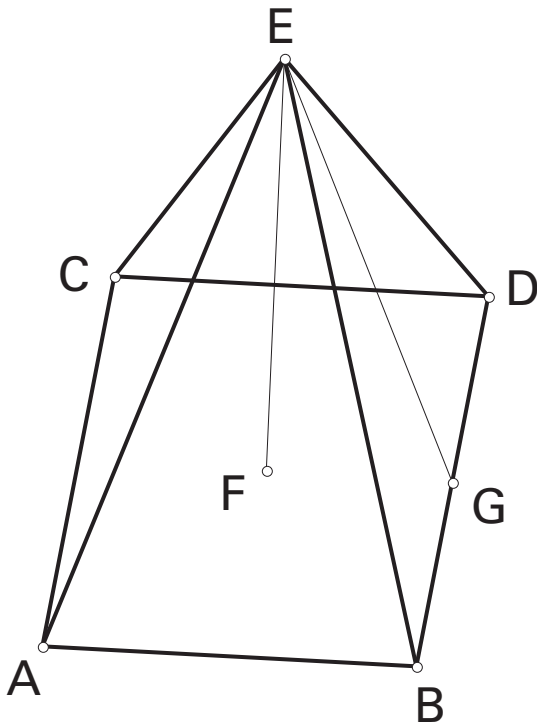


Manipulating pyramids



$$m \angle GFE = 90^\circ$$

$$m \overline{GE} = 6.0 \text{ cm}$$

$$m \overline{EF} = 5.5 \text{ cm}$$

$$m \overline{DB} = 5.0 \text{ cm}$$

$$BG = 2.5 \text{ cm}$$

$$GF = 2.5 \text{ cm}$$

The base of the pyramid is square and the four triangular faces are congruent.

1. Find the surface area and volume of this pyramid.
2. Double each side of the square and find the new surface area and volume.
3. From the original, double the height of the pyramid (EF) and find the new surface area and volume.
4. From the original, double the slant height (GE) and find the new surface area and volume.