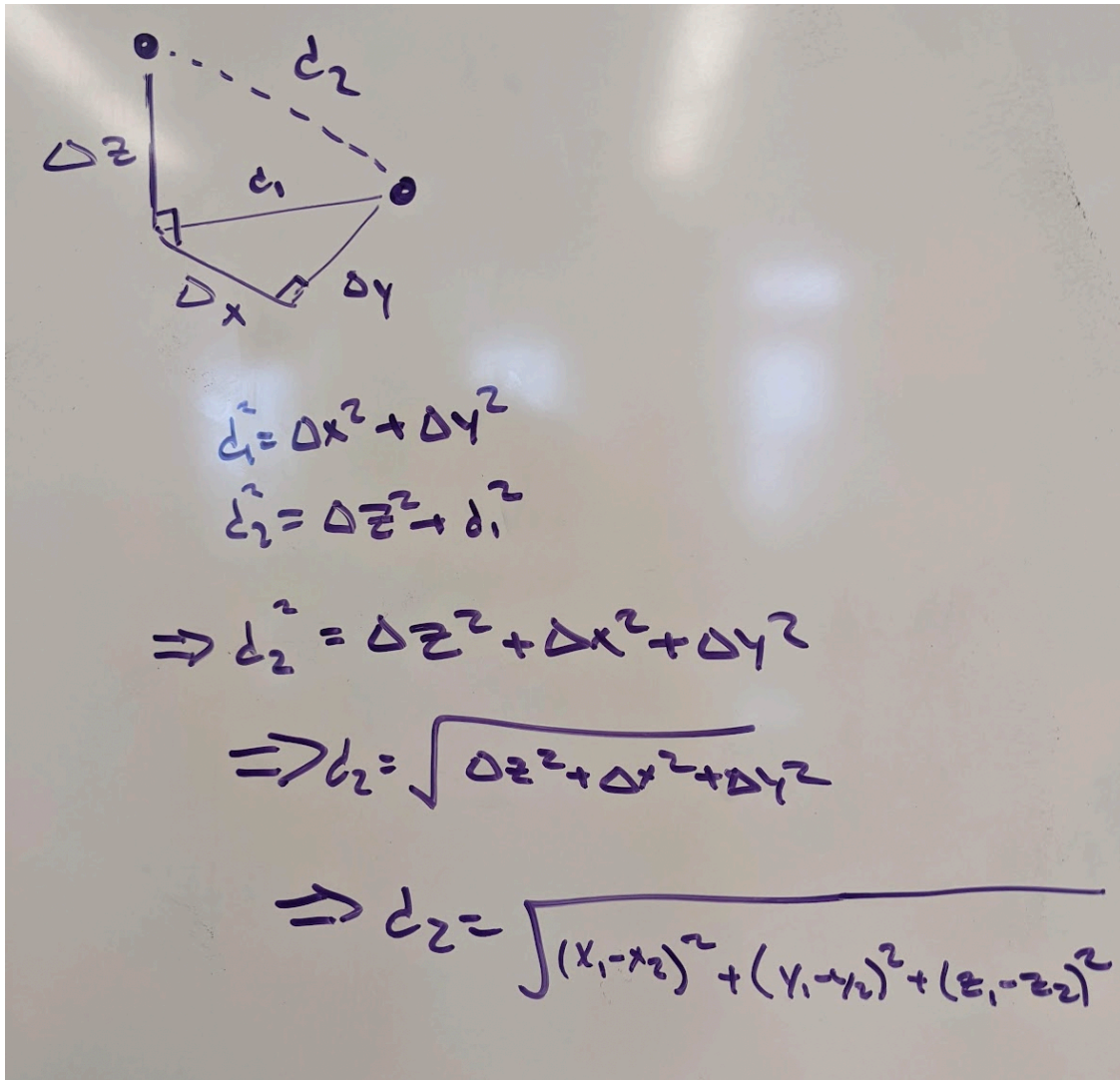


## 1 | 1.2



## 2 | 2.4

Because  $AC = \vec{a} + \vec{b}$  and  $DE = \frac{1}{2}(\vec{a} + \vec{b})$ , you know that  $DE = \frac{1}{2}AC \Rightarrow |DE| = \frac{1}{2}|AC|$ , by the definition of scalar multiplication. Thus the length of the midsegment is half the length of the base. You know that the midsegment is parallel to the base because scalar multiplication does not change the direction of the vector (unless negative, which it is not in this case) only the magnitude, thus the two line segments are in the same direction and thus they are parallel.

3 | 3

