

Quiz Free Response Expectations

Since the use of calculators will be permitted and necessary for the quizzes, we want to make our expectations clear. When showing your work on the Free Response problems,

- Units should be shown with any value that has a unit
- Algebraic manipulations should be performed with symbols, not values
- Consider, but do not obsess over, significant figures.

For example, consider the question: “An object moves at a constant velocity of 3.0 m/s. How much time is required for it to travel a distance of 2.0 m?”

This solution is *incorrect*:

$$v = \frac{d}{t} \quad \Rightarrow \quad 3.0 = \frac{2.0}{t} \quad \Rightarrow \quad t = \frac{2.0}{3.0} = 0.6667 \text{ s}$$

as it violates all three of the expectations above. Compare it to this correct solution:

$$v = \frac{d}{t} \quad \Rightarrow \quad t = \frac{d}{v} \quad \Rightarrow \quad t = \frac{2.0 \text{ m}}{3.0 \text{ m/s}} = 0.67 \text{ s}$$