# Quiz 4

Name(s):
Show *all* your work. Reasonable supporting work must be shown for any partial credit.

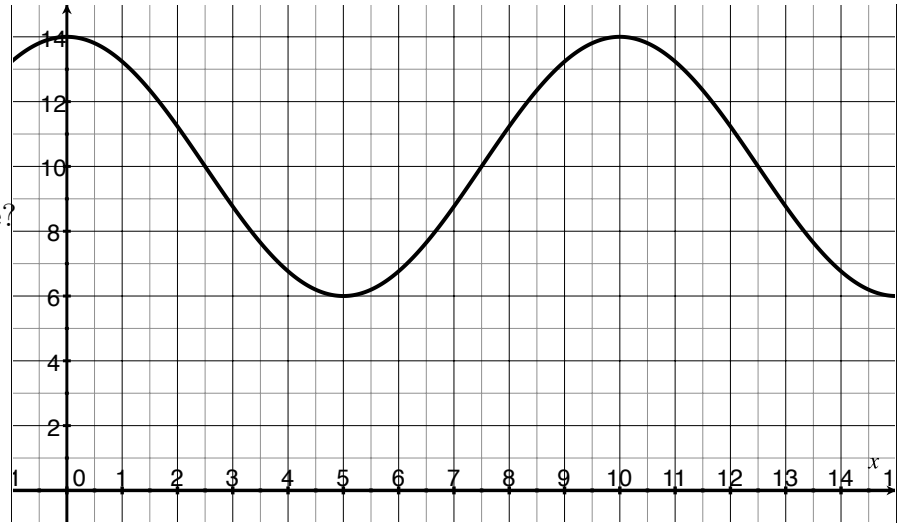
1. [2] Find three angles $\theta$ so that $\cos(\theta) = \frac{\sqrt{2}}{2}$.

2. The depth of water in $d$ feet, in a channel $x$ hours after midnight is graphed below.

   (a) [1] Estimate the channel depth at 10am.

   (b) [1] When is low tide?

   (c) [1] What is the period of $d$?




   (d) [2] Describe either:
   - the graph transformations need to transform the basic cosine graph into the graph of $d(x)$, or
   - the amplitude, period, and phase shift for the graph of $d(x)$.

   (e) [3] Find an algebraic rule for the function $d$ (note that there are *many* correct answers for this!).