# Math 10860, Honors Calculus 2

## Quiz 6, Thursday February 27

### Just for practice

1. When we began discussing the trigonometric functions, we gave a precise definition of the function cos on the domain $[0, \pi]$. State that definition.[1]

2. From the angle-summation formulae (together with the basic Phythagorean identity connecting sin and cos), other useful formulae can be deduced.

   (a) Verify that[2]
   $$\cos^2 \theta = \frac{1 + \cos 2\theta}{2}$$

   (b) Verify that[3]
   $$\tan(t/2) = \frac{\sin t}{1 + \cos t}.$$

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[1]You don't need to argue that it is a meaningful definition.
[2]There's also $\sin^2 \theta = \frac{1-\cos \theta}{2}$, which is worth remembering.
[3]This also equals $\frac{1+\cos t}{\sin t}$