

# Quiz 6

Show *all* your work. No credit is given without reasonable supporting work. There are *two* sides to this quiz.

1. [2] (WebHW11 #3) Find the *exact* value of the trigonometric functions at the given real number. Note: your calculator cannot do these for you.

$$\sin\left(\frac{\pi}{4}\right) \qquad \cos\left(\frac{-5\pi}{6}\right) \qquad \cos\left(\frac{13\pi}{6}\right) \qquad \tan\left(\frac{2\pi}{3}\right)$$

2. [3] (§5.2 #63/§6.2 #17) The angle  $\theta$  is such that  $\sin\theta = \frac{12}{13}$  and its terminal side is in quadrant two. Find the following:

$$\cos\theta$$

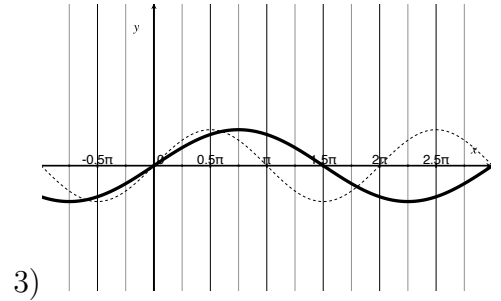
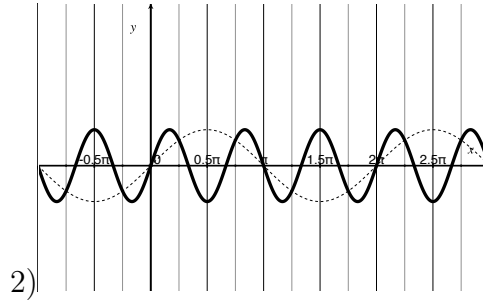
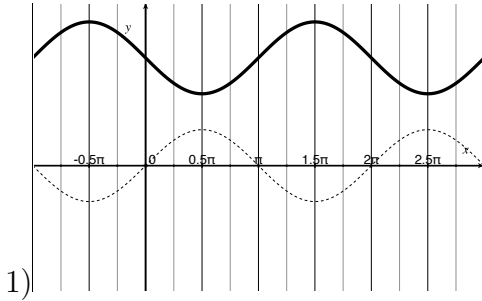
$$\tan\theta$$

3. [2] (WebHW 11 #3 & §4.2 #38) Assume that  $A$  and  $B$  be a positive numbers greater than 1. Match the following functions to their corresponding graphs. Note that each graph has the dotted graph of  $y = \sin(x)$  for reference.

i)  $y = \sin(Ax)$

ii)  $y = -\sin(x) + A$

iii)  $y = \sin\left(\frac{x}{B}\right)$



4. [3] (WebHW11 #17) Find the side labeled  $x$  in the picture below where  $A$  is 93 units long. Note, the diagram is *not* drawn to scale.

