

MAT 120 Quiz 4 Answer Sheet

Fall 2022

Quiz ID: MVX

Name: \_\_\_\_\_

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Submit electronic answers at

<http://azrael.digipen.edu/cgi-bin/MAT120quiz.pl>

## MAT 120

## Quiz 4

Fall 2022

- Which angle has the same terminal point as  $7\pi/2$ :  
a)  $-\pi/2$       b) 0      c)  $-\pi/4$       d)  $-3\pi/2$       e)  $-\pi$
- Which angle has the same terminal point as  $17\pi/4$ :  
a)  $-\pi/2$       b) 0      c)  $\pi/4$       d)  $-3\pi/2$       e)  $-\pi$
- Find  $(\sin^2(-\pi/4)) + (\cos^2(-\pi/4))$ :  
a) 0      b) 1      c)  $-1$       d)  $\frac{\sqrt{2}}{2}$       e)  $\frac{\sqrt{3}}{2}$
- Find  $\cos(3\pi/4)$ :  
a)  $-\frac{\sqrt{2}}{2}$       b) 0      c)  $-\frac{\sqrt{3}}{2}$       d)  $\frac{\sqrt{2}}{2}$       e)  $\frac{\sqrt{3}}{2}$
- Find  $\cos(3\pi/2)$ :  
a)  $\frac{\sqrt{2}}{2}$       b) 0      c)  $-\frac{\sqrt{3}}{2}$       d)  $\frac{\sqrt{3}}{2}$       e)  $-\frac{\sqrt{2}}{2}$
- Find  $\sin(5\pi/6)$ :  
a)  $\frac{\sqrt{2}}{2}$       b) 0      c)  $\frac{1}{2}$       d)  $\frac{\sqrt{3}}{2}$       e)  $-\frac{\sqrt{2}}{2}$
- What is the period of the function:  $\sin(8\pi t)$  ?  
a) 5      b) 4      c) 1      d) 0.2      e) 0.25
- Suppose a function (or signal) is the product of two sinusoids:  $f(t) = \sin(2\pi 220t) \sin(2\pi 3t)$ . How many beats (amplitude oscillations) per second does this produce?  
a) 6      b) 2      c) 8      d) 4      e) 1
- Same function  $f$  as in the previous problem. What is the audible frequency?  
a) 6 Hz      b) 3 Hz      c) 220 Hz      d) 440 Hz      e) 880 Hz
- Same function  $f$  as in the previous problem. One of the factors is a Low Frequency Oscillator (LFO). What is the length of one period of the function that gives the LFO?  
a)  $\frac{1}{2}$       b)  $\frac{1}{3}$       c) 2      d)  $\frac{1}{6}$       e)  $\frac{2}{3}$