8) Compute $sin(7\pi/4 - 5\pi/6)$. Recall that $sin(7\pi/4) = -\sqrt{2}/2$ and $sin(5\pi/6) = 1/2$ 8) ___

(Note: You will need to figure out $cos(7\pi/4)$ and $cos(5\pi/6)$ yourself in order to solve this problem.)

A) $\frac{\sqrt{6}+\sqrt{2}}{4}$ B) $\frac{-\sqrt{6}-\sqrt{2}}{4}$ C) $\frac{-\sqrt{6}+\sqrt{2}}{4}$ D) $\frac{\sqrt{6}-\sqrt{2}}{4}$

9) Convert 240 degrees to radians. 9) ___

A) $43200/\pi$ B) $4\pi/3$ C) $3\pi/4$ D) π

10) Find the phase shift of the function $f(x) = 3sin(x - \pi/4)$. 10) ___

A) 3 B) $\pi/4$ C) $\pi/2$ D) 2

11) Convert $5\pi/12$ radians to degrees. 11) ___

A) 37.5 B) 150 C) 75 D) 180

12) Compute $arcsin(sin(5\pi/4))$. (Remember that the range of arcsin is $[-\pi/2, \pi/2]$). 12) ___

A) $-\pi/4$ B) $\pi/4$ C) $5\pi/4$ D) $3\pi/4$

13) On a circle of radius 10, find the central angle that subtends an arc of length 5π. 13) ___

A) ½ B) 2 C) $\pi/2$ D) 2π

14) Compute $cos(3\pi/2 + 2\pi/3)$. Recall that $sin(3\pi/2) = -1$ and $cos(2\pi/3) = -1/2$. 14) ___

(Note: You will need to figure out $cos(3\pi/2)$ and $sin(2\pi/3)$ yourself.)

A) $\sqrt{3}/2$ B) ½ C) -½ D) $-\sqrt{3}/2$

For problems 15-16, let $f(x) = x^2 + 4x + 5$

15) Compute $f'(x)$. 15) ___

A) 2x B) 4 C) 5 D) 2x + 4

16) When is $f(x)$ increasing? 16) ___

A) x <-2 B) x >-2 C) All real numbers D) Nowhere