

Pre-Calculus Multiple Choice Questions - Chapter A7

1 Find the exact value of the following trigonometric function

$$\tan(7\pi/12)$$

- a $-2 - \sqrt{3}$ b $2 - \sqrt{3}$
c $-2 + \sqrt{3}$ d $2 + \sqrt{3}$

	A7.1
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2 Find the exact value of the following trigonometric function

$$\sin(15^\circ)$$

- a $(\sqrt{6} + \sqrt{2}) / 4$ b $(\sqrt{2} - \sqrt{6}) / 4$
c $(\sqrt{6} - \sqrt{2}) / 4$ d None of the above

	A7.1
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3 Simplify the following trigonometric function

$$\sin(\pi/2 - x)$$

- a $\tan x$ b $\sec x$
c $\cos x$ d $\csc x$

	A7.1
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1 Find the exact value of $\cos 112.5^\circ$

a $2\sqrt{2}$

c $3\sqrt{2}$

b $\sqrt{2}$

d $\frac{\sqrt{2}-\sqrt{2}}{2}$

	A7.2
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2 Solve the following trigonometric equation in the domain $[0, 2\pi]$

$$|\sin(x)| = 1$$

a $x = \pi/2$ and $x = 3\pi/2$

c $x = \pi/4$

b No solution

d $x = 3\pi/4$

	A7.2
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3 Which of the following are solutions to the following equation on the interval $[0, 2\pi)$?

$$\sin^4 x = 2 \cos^4(x/2)$$

a 2π

c π

b $\pi/3$

d $\pi/4$

	A7.2
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1 Which of the following is an equivalent expression to the following?
 $\sin(x + 3\pi/2)$

- a $\sec(x)$ b $-\cos(x)$
c $-\sec(x)$ d $\cos(x)$

	A7.3
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2 Which of the following is a solution to the following equation on the interval $[0, 2\pi)$
 $2 \cos^2 x - \sin x - 1 = 0$

- a $\pi/2$ b $\pi/3$
c π d $\pi/6$

	A7.3
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3 Which of the following is a solution to the following equation on the interval $[0, 2\pi)$
 $\csc x - \cot x = 1$

- a $\pi/6$ b $\pi/2$
c $\pi/3$ d π

	A7.3
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