Honors Precalculus

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 $\sin(x) = \cos(x) = -\frac{1}{2} \qquad \tan(x) =$

a) sin t · csc t = 1 b) $\frac{\cos x \tan x}{\cos x} = \sec x$ 10. Solve $2 \sin x + \sqrt{3} = 0$ on the interval $[0, 2\pi)$. 11. Use a sum and difference formula to find $\sin (15^\circ) \exp(10^\circ)$ (no decimals). 12. Given the angles shown, find $\cos(u + v)$ 13. Use the figure from Problem 12 to find sin (2u). 14. Solve the triangle. 15. Find the area of the triangle in problem 14 by first finding the height. 16. Find the area of the triangle in problem 14 by first 16. Find the area of the triangle in problem 14 by 1° 17. Find the length of side A. $\frac{v + v}{v + v} = \frac{v + v}{v + v}$ 17. Find the length of side A. $\frac{v + v}{v + v} = \frac{v + v}{v + v}$	9. Verify the following trig identities.	c) $(1 + \sin x)(1 - \sin x) = \cos^2 x$
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24. List the polar coordinates for the points shown. $ \frac{1}{5}\pi/6$	25. a) Convert point D from problem 24 to rectangular coordinates.b) Convert (4, -4) to polar coordinates.
26. Use back substitution to solve. $\begin{aligned} x - y + 2z &= 22 \\ 3y - 8z &= -9 \\ z &= -3 \end{aligned}$	27. Get the following to Row Echelon form. 4x + y - 3z = -11 $2x - 3y + 2z = 9$ $x + y + z = 3$
28. Write the following as an augmented matrix and then use a calculator to get it to RREF to solve it. 4x + y - 3z = -11 2x - 3y + 2z = 9 x + y + z = 3	29. Let A and B be the matrices shown. Find the following: $A = \begin{bmatrix} -5 & 4 \\ 2 & -9 \end{bmatrix} \qquad B = \begin{bmatrix} 8 & -2 \\ 4 & 0 \end{bmatrix}$ $3A - 4B \qquad A \cdot B$
30. Find the multiplicative inverse for matrix B from the prior problem.	31. In trying to solve the system using inverse matrices, a student writes the following. Explain and then correct the error. $-x + 4y = 8$ $2x - 7y = -5$ $\begin{bmatrix} x \\ y \end{bmatrix} \in \begin{bmatrix} 8 \\ -5 \end{bmatrix} \begin{bmatrix} -1 & y \\ 2 & -7 \end{bmatrix}^{-1}$

