Precalculs Exam # 4 Version 1 [1]

We assume that $\pi = 3.1415926.....$ $\cos\frac{\pi}{3} = \frac{1}{2}$.

1. (10) Convert $x^2 + y^2 = 4x$ into polar form.

2. (10) Convert $r = 2\cos\theta$ to rectangular form.

3. (10) Draw a graph of $r = 2$.

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4. (30) Solving the following triangles.

   (a) $a = 2$, $b = 3$, $c = 4$. Find A, B, C.

   (b) $a = 2$, $b = 3$, $C = \frac{\pi}{3}$. Find c, A, B.

5. (10) Find the magnitude of the vector $\mathbf{u} = -3\mathbf{i} + 4\mathbf{j}$.

6. (10) Change the polar coordinates $(5, \frac{2\pi}{3})$ into rectangular coordinates.