

**San Jose State University**  
**Department of Mathematics**

**MATH 32, Practice Midterm 1, Fall 2008**

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1. Find the polar equation of the curve given by Cartesian coordinates  $xy = 4$ .
2. Compute  $a \cdot (b \times c)$  for  $a = \langle 1, 1, 1 \rangle$ ,  $b = \langle 1, -1, 1 \rangle$ , and  $c = \langle -1, 1, 1 \rangle$ .
3. Find the equation of the plane through the points  $(1, 1, 1)$ ,  $(1, 3, 2)$  that contains the vector  $\langle -1, -1, 1 \rangle$ .
4. What is the angle between the planes  $x + 4y - 2z = 1$  and  $-3x + 6y + 7z = 0$ .