

## EE 380 Fall 2009 Quiz #1

Name: \_\_\_\_\_

ID: \_\_\_\_\_

Sec# \_\_\_\_\_

1. Is  $\sin(2x)$  even or odd? \_\_\_\_\_;
2. Is  $\sin(x^2)$  even or odd? \_\_\_\_\_
3. Rewrite  $A\sin(\omega t) + A\cos(\omega t)$  as a single sine: \_\_\_\_\_
4.  $e^{\ln(1)} =$  \_\_\_\_\_;  $e^{j\pi/2} + (e^{j\pi/2})^* =$  \_\_\_\_\_;
5. The roots of  $x^2 - 2x + 10 = 0$  are: \_\_\_\_\_ and \_\_\_\_\_
6. Let  $z = e^{-2i}$ ,  $|z| =$  \_\_\_\_\_,  $\angle z =$  \_\_\_\_\_;
7.  $L\{\delta(t)\} =$  \_\_\_\_\_;  $L\{u(t)\} =$  \_\_\_\_\_;
8.  $L^{-1}\{1/(s-a)\} =$  \_\_\_\_\_;
9. If  $\frac{s+1}{s(s-2)(s+3)} = \frac{A}{s} + \frac{B}{s-2} + \frac{C}{s+3}$ , then  $A =$  \_\_\_\_\_;
10. The Euler identity says  $e^{jx} =$  \_\_\_\_\_.