

Name: Key

EE432 Fall 2008 Quiz 02

Use MATLAB to find ALL answers below. Write the command(s) you used to find them.

1. $e^3 = \boxed{20.0855}$
 $\text{exp}(3)$

2. $\tan^{-1}(0) = \boxed{0}$
 $\text{atan}(0)$

3. $\sin(30^\circ) = \boxed{0.5}$
 $\sin(\pi/6)$ or $\text{sind}(30)$

4. $x^6 + x^3 + 15.345$, if $x = -2.82$. $= \boxed{495.8343}$
 $x = -2.82$
 $x^6 + x^3 + 15.345$

5. if $t = 0:0.02:7$, and $x = 2t - 5$, what is the 17th value of the x vector?

$t = 0:0.02:7;$
 $x = 2*t - 5$
 $x(17)$

$\boxed{-4.36}$

6. $|4 - j3.3|$ (find the magnitude) $= \boxed{5.1856}$
 $\text{abs}(4 - j*3.3)$

7. If you create a time vector that starts at time -3, and ends at time 6, with a step size of 1/47, how many elements will there be in the time vector?

$$t = -3 : 1/47 : 6 ; \quad \boxed{424}$$

$\text{length}(t)$

8. For the same time vector you created in problem 7, how much time is there between the 1st and 2nd times in the time vector? How much time between the last and next-to-last time?

$$t(2) - t(1) \quad \boxed{0.0213}$$

$$t(\text{end}) - t(\text{end}-1) \quad \text{or} \quad t(424) - t(423)$$

9. Multiply: $10 + j2.86$ by $10 - j2.86$.

$$(10 + j * 2.86) * (10 - j * 2.86)$$

$$\boxed{108.1796}$$

10. $\sqrt[5]{4.556}$

$$4.556^{(1/5)} \quad \boxed{1.3543}$$

Bonus: What was the last name of the Russian Royal family (the Tsar's family) that was executed after the Russian Revolution of 1917?

Romanov