

Quiz 5 Form A  
Oct 30, 2017

[10] 1. Let  $y_1$  and  $y_2$  be solutions of  $ty'' + 4y' + \sin(t)y = 0$ ;  $t > 0$ . Let  $W(t)$  be the Wronskian of  $y_1(t)$  and  $y_2(t)$ . Given that  $W(1) = 3$ , find  $W(t)$ .

$W(t) =$  \_\_\_\_\_

[10] 2.) Write  $y = \sqrt{3}\cos(5t) - \sin(5t)$  in the form  $y = R\cos(\omega t - \delta)$ . Determine the period, phase, and amplitude.

$y =$  \_\_\_\_\_

period= \_\_\_\_\_, phase= \_\_\_\_\_, and amplitude= \_\_\_\_\_.