6-3. 0=-T/4 w=2T 1=20cm T=1 .. X = 20 cos (0) = 20 cos (211+ - 1/4) y= 20 sin(0) = 20 sin (2TT+ - T/4) 6-7 A=2 T=.5s f=2 No 6 : y(+)= 2sin (0) = 2sin (411+) 6-14a. 0= = W= 47 : f= 27 = 2
A=10 T= = Ts= T2/41 = WA = b. X(+)=0cm : += T + 1 6-70, a. A=12 W=120T : f= 60 T= 60 ts= -17/2/12017 = -1/240 S Earliest Max: # - 240 C. Mcos (120 T+ +0) = 10 cos (120 T+) + (2 cos (120 T++T/2) M Cos(120TH) cos(4) - M sin (120TH) sin (4) 2 10 cos (120TH) + 12cos(120TI+) M cos 0= 10 - 12 sin (=) since our Msin 0=+ 12 M= 1244 = 15.62 Ø= tax-1 (12/10) = 50.20 6-26.a. Msin (100++ 0) = 100 cos (100 #+ + 1) + 500 cos (100+ + 311) Msin(100+) cos & + Mcas(100+) sin () = 100 cas (100+) cos (I) - 100 sin (100+) (I) + Jos M cos 0 = 100 cos () + 500 cos () = -400/12 Cos (100+) cos () -500 sia (0007) cos Msin 02 -100 rin (=) -500 sin (37) = -600/VE (= + an -1 (-60050/-40052)= 56.30 M= /(-400/52)2+(-600/52)2 = 509.9

b. A=.51 W=1004 :: f= == 15.91 :: T= 15.11 € .062 C. 51 15=146.310/100 =-1.4631 Max: = -1.4631 = 8 w= 411 -: F= # - 2 6-31. a. A Zero: TT-12 C. Mas (417++b) = 8sin (417++#)+6cos (477+) $M_{cos}(411+)cos(6)-M_{sin}(411+)sind=8_{sin}(411+)sin(\frac{\pi}{2})+8_{cus}(411+)cos(\frac{\pi}{2})+6_{cus}(411+)sin(\frac{\pi}{2})+8_{cus}(411+)cos(\frac{\pi}{2})+6_{cus}(411+)sin(\frac{\pi}{2})+8_{cus}(411+)cos(\frac{\pi}{2})+6_{cus}(411+)sin(\frac{\pi}{2})+8_{cus}(411+)cos(\frac{\pi}{2})+6_{cus}(411+)sin(\frac{\pi}{2})+8_{cus}(411+)cos(\frac{\pi}{2})+6_{cus}(411+)sin(\frac{\pi}{2})+8_{cus}(411+)cos(\frac{\pi}{2})+6_{cus}(411+)sin(\frac{\pi}{2})+8_{c$