

4.4 day 4 ws key

2. a) 0, 0.5, 0, -0.5, 0, 1.5, 4
b) 5.5
c) $x=1$
d) $x=3$
3. a) 0, 2, 5, 7, 3
b) (0,3)
c) $x=3$
4. a) 0, 0
b) 1, 3.75, 5.5
c) (-3,0)
d) $x=0$
5. i a) max at 0.75, 3.75, and 6.75, min at 2.25 and 5.25
b) 6.75
c) (0.5,1.5), (3,4.5), (6,7)
- ii a) max at 1.5 and 4.5, min at 3 and 6
b) 1.5
c) (0,2), (3.75,5.25)
6. a) $\sqrt{1+2x}$ b) $y^2 \sin y$
c) $-\tan x$ d) $\left(\arctan \frac{1}{x}\right)(-x^{-2})$
e) $\left(\frac{\cos \sqrt{x}}{\sqrt{x}}\right)\left(\frac{1}{2}x^{-1/2}\right)$ f) $\ln x$
g) $-\sin^3(e^x) \cdot e^x$ h) $(\sqrt{1+x^6})(2x)$