

# Math 267

## Review Sheet 2 - Answers

1. Answer on own.
2. Answer on own.
3.  $z - 3 = -3(x - 1) - (3/2)(y - 2)$
4. Using  $f(x, y) = e^x + \sin y$  we find  $f(2.1, 0.2) \approx e^2 + e^2(0.1) + 1(0.2)$ .
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6.  $\max = f(2, 3) = 26,$   
 $\min = f(-2, -3) = -26$
7. Answer on own.
8. a) vector  
b) scalar  
c) bad  
d) scalar  
e) bad  
f) vector  
g) bad  
h) bad  
i) bad  
j) bad  
k) scalar
9. Yes
10. Answer on own.
11. Answer on own.
12.  $dw/dt = 0, dw/ds = 0$
13. (1,1) and (-1,-1) both local min's and (0,0) is a saddle
14. 12.0474 (Mid-Point)
15.  $[1 - \cos(4)] * [e^2 - 1]$ .
16. Answer on own.
17. Answer on own.
18. Answer on own.
19.  $[256 * (\sqrt{2} - 1) * \pi]/3$
20.  $\ln(2)/2$
21.  $832 * \pi/15$
22.  $(21/10, 3/10)$

	p	q
a)	-	+
b)	-	+
c)	-	+
d)	-	+
e)	-	+
f)	0	-
g)	0	-
h)	-	+

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