

Chapter 9 - Differential Equations & Chapter 10 Parametric Equations

Each assignment has a total possible of **10 points**. For each section, self-grade for completion. (You may use 1/2 points.) I trust that you will give an honest evaluation of your own work. Your signature at the bottom indicates that this is an honest, accurate assessment of your work. Grades will be verified, as explained in class. Try additional problems for extra practice. Each assignment lists "Priority Problems" with a "PP" designation. Full credit awarded for completion of full assignment. *Assignments are subject to change. Any changes will be announced in class.*

_____ 9.2: p. 578 #1 – 14, 19ac, 21 – 24 (Handout attached for direction fields)
 PP: 1, 2, 19ac, 21, 23

Bring calculator for 9.2 & 9.4 lessons.

_____ 9.1: Read p. 566 – 572, Do p. 571 #1 – 6

_____ 9.3: p. 586 #1 – 19 odd, 29 – 32, Read 35 – 48 for example applications.
 Some will need integration by parts. For #9: Factor $(1 + u)(2 + t)$
 PP: 9.1 #1, 2, 5, 6, 9.3 #5, 7, 11, 15, 19, 29, 32

_____ 3.8: p. 239 #1– 5 (Read the other problems for example applications)

Hints: Ans. for 2a: $k = \ln 8$, Ans. for 4a: $k = \frac{1}{2} \ln 5$ and $y(0) = 120$, In #5 k changes each part.

_____ 9.4: Read p. 596 – 597, Do p. 598 #1, 3, 5, 9 (Read the other problems for example applications)

Hints: #1 Trace, #5 $k = (\text{births-deaths})/P_0 = 1/265$ with P in billions PP: 3.8 #3, 4, 5, 9.4 #5, 9
 #9b when is dP/dt maximum? i.e. solve $d^2P/dt^2 = 0$

_____ 9.5: p. 606 #1, 3, 6, 7, 9, 11, 14, 15, 17, 19.
 Read 9.6 (Bring Computer for 10.1)
 PP: 6, 9, 14, 17, 19

Quiz 9.1 – 9.5
 Optional checkpoint and/or review.
 Does not need to be included with HW.

_____ 10.1: p. 626 #1 – 13 odd, 12, 19 – 24, 28*, 33, 45 (Optional: 25 – 27, 34, 37, 38)
 *Okay to use a calculator or computer for 28. PP: 5, 7, 13, 19 – 22, 33, 45

_____ 10.2: Worksheet and p. 636 #1 – 19 odd, 37 – 41*, 43*, Revolution Area: 57 – 60*, 65*, 66*
 *Set up only okay for 37 – 66 PP: Worksheet, 5, 7, 15, 17, 37, 40, 41

_____ 10.3: p. 647 #1 – 27 odd, 28, 29 – 45 every other odd, 56, 57 – 62, Optional: #71 – 76
 Use a calculator or *Mathematica* to check the sketches.
 PP: 3, 5, 15, 17, 19, 27, 28, 29, 56, 57, 60, 61

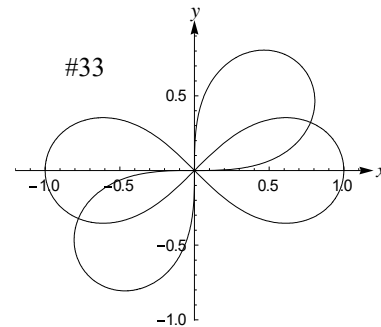
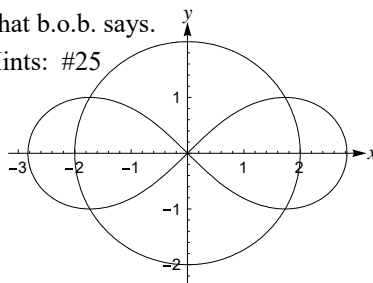
Quiz 10.1 – 10.3
 Optional checkpoint and/or review.
 Does not need to be included with HW.

_____ 10.4: p. 653 #1 – 41 every other odd, 31, 35 (Some hints below)

Note: #33 Answer is $1 - \sqrt{2}/2$, not what b.o.b. says.

PP: 9, 13, 21, 25, 29, 31, 41

Hints: #25



_____ Polar Worksheet

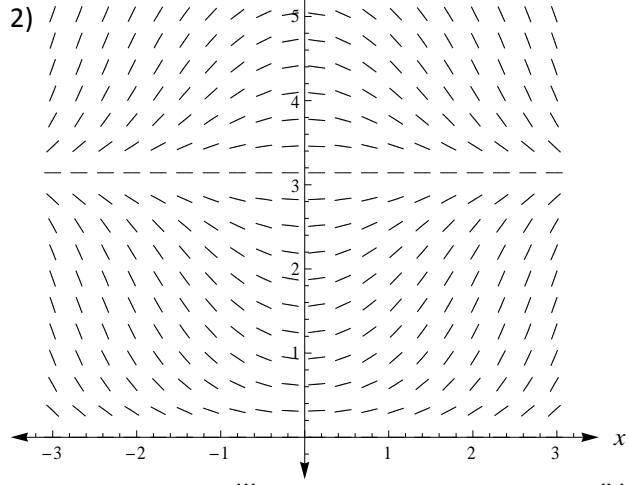
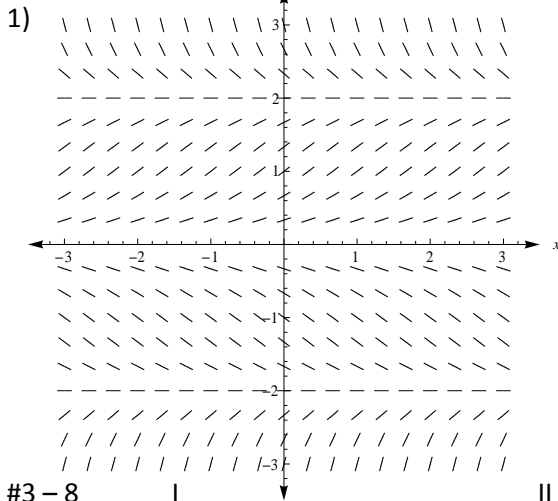
_____ **Total** (90 Points)

Signature: _____ Date: _____

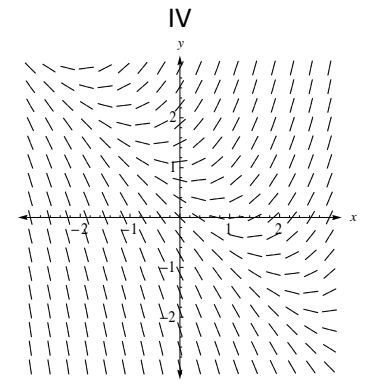
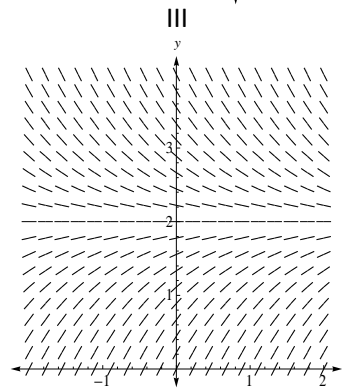
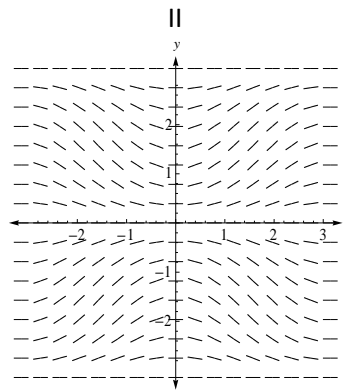
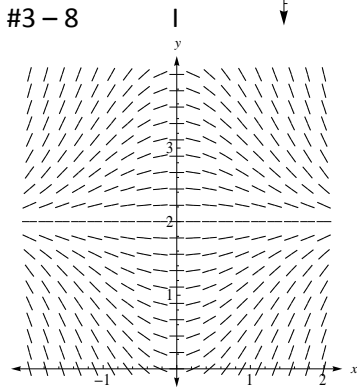
Verified By: _____

9.2 Direction Fields for Homework

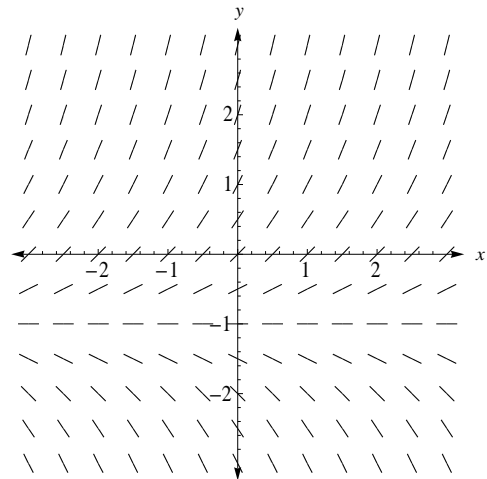
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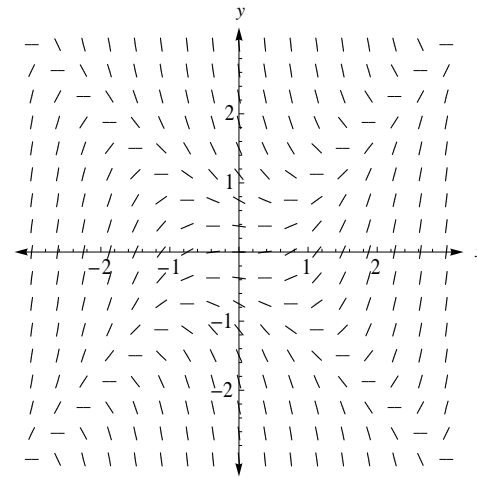
#3-8



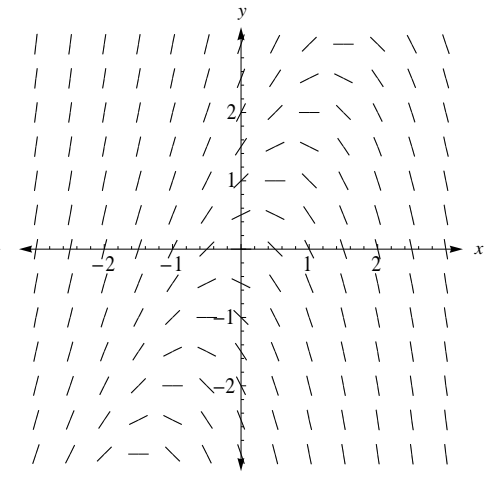
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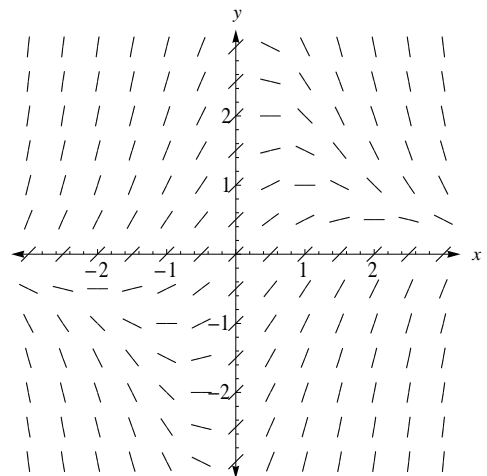
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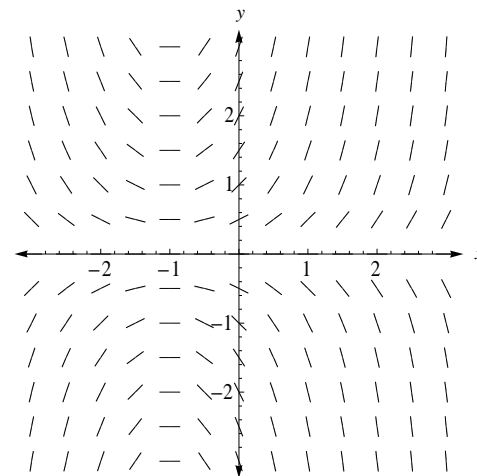
11)



12)



13)



14)

