

Name:

Exam 3

Sec 4
Winter 2019
Exam 3

Name: _____

Time Limit: 90 min

- **DO NOT open the exam booklet until you are told to begin. You should write your name and section number at the top and read the instructions.**

Problem	Points	Score
1	10	
2	10	
3	7	
4	10	
5	15	
Total:	52	

- Organize your work, in a reasonably neat and coherent way, in the space provided. If you wish for something to not be graded, please strike it out neatly. I will grade only work on the exam paper, unless you clearly indicate your desire for me to grade work on additional pages.
- You may use any results from class, homework or the text, but you must cite the result you are using. You must prove everything else.
- You needn't spend your time rewriting definitions or axioms on the exam.
- Show all of your work. You may not receive full credit for correct answers if supporting work is not demonstrated.
- When you have completed your test, hand it to me and go have a great weekend!

1. Solve for x,

(a) (5 points) $\log_{16} x = \frac{1}{2}$

(b) (5 points) $\log_{\frac{1}{2}}(2x + 1) = 4$

2. Solve each inequality,

(a) (5 points) $9x + 13 \geq 8x$

(b) (5 points) $8 \geq 2x + 5 > -1$

3. Find the domain of the following functions.

(a) (3 points) $f(x) = x^2 - 3x + 1$

(b) (4 points) $g(x) = \frac{\sqrt{x}}{x-1}$

4. For the points $(0, -2)$ and $(4, 0)$,

(a) (5 points) find the slope of the line passing through the points.

(b) (5 points) find the equation of the line passing through the points.

5. for the function $g(x) = x^2 + 6x + 5$,

(a) (3 points) find the vertex.

(b) (3 points) find the x -intercepts.

(c) (3 points) find the y -intercept.

(d) (6 points) Graph the function,

