

Day 5 Answers

Differential Equations #1

- a. Slope fields
- b. 3.9
- c. $y = \frac{1}{\frac{1}{3} - \ln(x-1)}$

Differential Equations #2

- a. Slope fields
- b. $\frac{d^2y}{dx^2} = 2 - 2x + y$ Concave up because $\frac{d^2y}{dx^2} > 0$
- c. Neither
- d. $m = 2$ & $b = -2$

Differential Equations #3

- a. graph
- b. $f(2) \approx 1.4$
- c. $y = 3 - 2e^{-\sin x}$

Differential Equations #4

- a. $f(1.2) \approx -0.6$
- b. $y = -\ln(-x^3 + 3x^2 - 1)$

Differential Equations #5

- a. Slope Fields
- b. $f(x) = 1 - e^{\left(\frac{1}{2} - \frac{1}{x}\right)}$
- c. $1 - \sqrt{e}$

Multiple Choice

- | | |
|-------|-------|
| 41. C | 46. D |
| 42. B | 47. C |
| 43. A | 48. D |
| 44. D | 49. D |
| 45. D | 50. A |