Phileas Dazeley-Gaist **coa-feldman-es1026i-winter-2022**
Assignment Homework_02 due 01/14/2022 at 11:59pm EST

Problem 1. **(1 point)**

Find the fixed point of the function $f(x) = 4x + 2$.

The fixed point is ___.

Answer(s) submitted:

- -0.666

(correct)

Problem 2. **(1 point)**

Find the fixed point of the function $f(x) = -10x + 1$.

The fixed point is ___.

Answer(s) submitted:

- 1/11

(correct)

Problem 3. **(1 point)**

Find the fixed point of the function $f(x) = 5x + (-6)$.

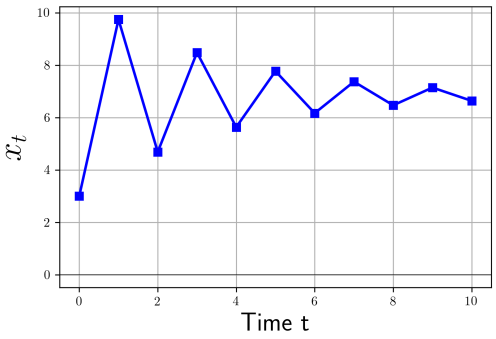
The fixed point is ___.

Answer(s) submitted:

- 1.5

(correct)

Problem 4. **(1 point)**



A time series plot is shown in the figure. Use the plot to determine the value of the following:

The initial condition is ___.

The iterate x_5 = ___.

The iterate x_7 = ___.

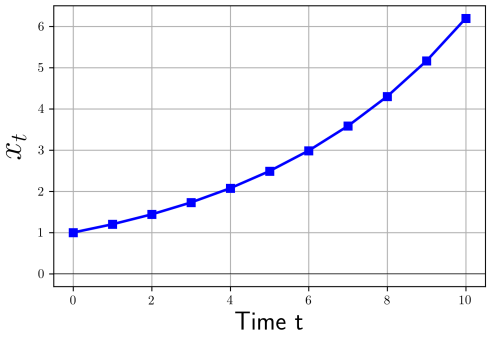
Optional puzzle. The time series plot was generated by a linear function: i.e., something of the form: $f(x) = mx + b$. What are the values for m and b? (The exact value of x_1 is 9.75.)

Answer(s) submitted:

- 3
- 7.9
- 7.2

(correct)

Problem 5. **(1 point)**



A time series plot is shown in the figure. Use the plot to determine the value of the following:

The initial condition is ___.

The iterate x_9 = ___.

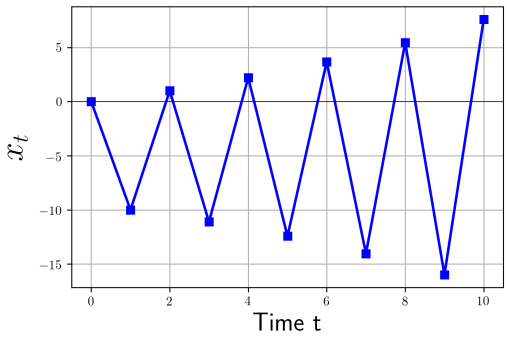
The iterate x_1 = ___.

Answer(s) submitted:

- 1
- 5.1
- 1.2

(correct)

Problem 6. **(1 point)**



A time series plot is shown in the figure. Use the plot to determine the value of the following:

The initial condition is ___.

The iterate x_2 = ___.

The iterate x_8 = ___.

Answer(s) submitted:

- 0
- 1
- 6

(correct)

Problem 7. **(1 point)**

Consider the logistic equation, $f(x) = rx(1-x)$, with $r = 3.3$.

What are the first 3 iterates of the seed $x_0 = 0.177$?

x_1 = ___.

x_2 = ___.

x_3 = ___.

Answer(s) submitted:

- 0.480714
- 0.823773
- 0.479065

(correct)