

Digital vs. Analog

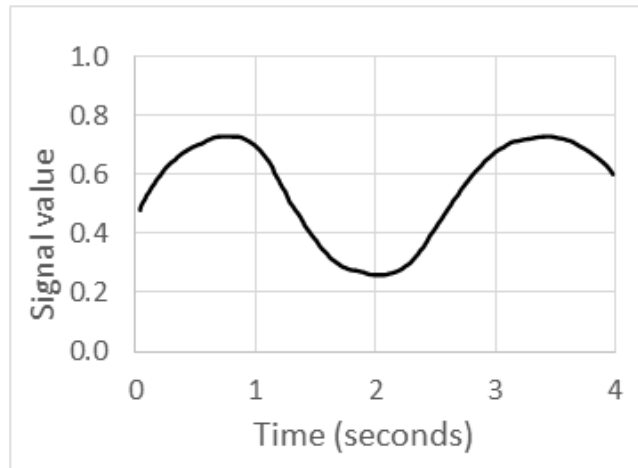
Name: _____

Student quiz

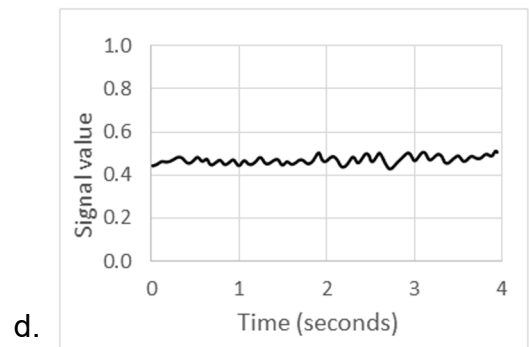
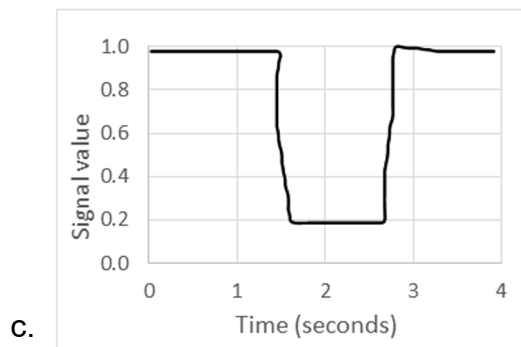
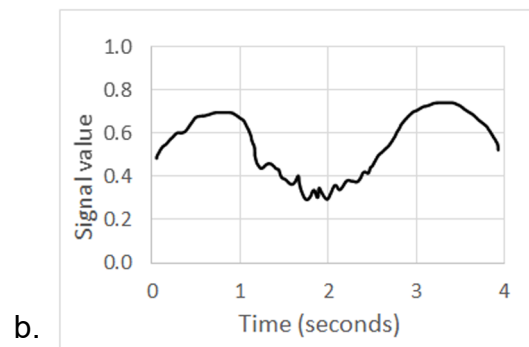
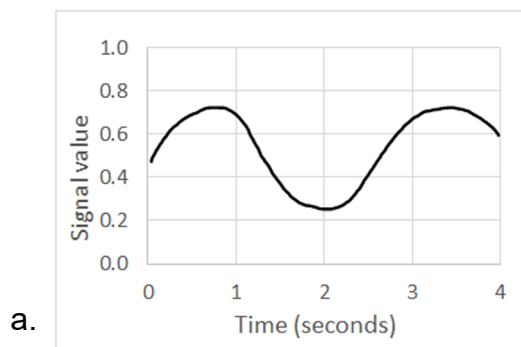
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Directions: Answer the questions below.

1. The graph below shows an analog signal recorded in an environment with zero noise.



Which of the following graphs best represents what the signal would look like if it was recorded in a noisy environment?



Digital vs. Analog—Page 2

Name: _____

Date: _____

Student quiz

Directions: Answer the questions below.

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2. In your own words, explain why digital signals are better than analog signals for sending or storing information.
3. The sensor app on your phone includes a light sensor. Imagine that you are doing this project again, but instead of using sound to send a signal, you use light (by aiming a flashlight at the phone). What are some possible sources of “noise” in your classroom that could affect the signal?

Digital vs. Analog—Page 3

Student quiz

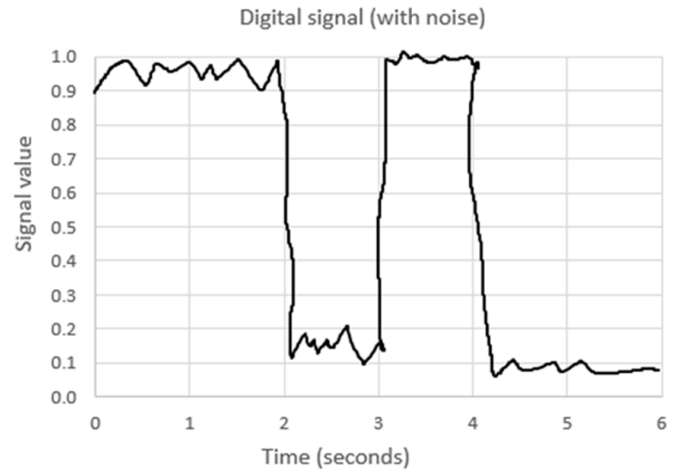
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Directions: Answer the questions below.

4. The graph below shows an example digital signal with noise. Which of the following statements is true?

- a. The value at time = 1.5 seconds is low.
- b. The value at time = 1.5 seconds is high.
- c. Because the signal is noisy, you cannot determine whether the signal is high or low at time = 1.5 seconds.
- d. None of the above.



5. The graph below shows an example analog signal with noise. Which of the following statements is true?

- a. Because the signal is noisy, you cannot determine the exact original value of the signal (without noise) at time = 2 seconds.
- b. The original value of the signal (without noise) at time = 2 seconds is exactly 0.4.
- c. The original value of the signal (without noise) at time = 2 seconds is zero.
- d. None of the above.

