Question 2

A population of sunflower plants is described as having a monthly growth rate that follows a normal distribution with $\mu = 3.08$ in and $\sigma = 0.40$ in.

Use this information to answer the following questions.

(1/1 point)
2a. What is the probability that a randomly chosen sunflower plant grows more than 3.2 inches in a month? *(Round to 3 decimal places.)*

0.382 ✔ **Answer:** 0.382

0.382

You have used 1 of 1 submissions

(1/1 point)
2b. A middle-school science class grew 25 of these sunflowers. How many inches would they expect these flowers to have grown, on average, one month later? *(Round to 2 decimal places.)*

3.08 ✔ **Answer:** 3.08

3.08

You have used 1 of 1 submissions

(1/1 point)

2c. The middle school science teacher replicates her study with 25 new sunflowers every year. How much variability in inches should she expect in the average monthly growth of these samples? *(Round to 2 decimal places.)*

0.08 ✔ **Answer:** .08

0.08

You have used 1 of 1 submissions

(1 point possible)

2d. The science teacher notices that the average monthly growth of her 25 sunflowers has never exceeded 3.2 inches. What should she conclude?

- ◉ About 38% of her samples should have an average growth of 3.2 inches or more, so something is wrong with her data. ✖
- ○ Her data suggests that the original growth parameters given for this sunflower population must be wrong.
- ○ We wouldn't expect to see an average monthly growth of 3.2 inches for a sample of 25 plants. Her data is probably fine. ✔

You have used 1 of 1 submissions

(1/1 point)

2e. What is the probability that her next sample of 25 sunflowers will grow an average of more than 2.9, but less than 3.2 inches, in a month? *(Report as a proportion rounded to 3 decimal places.)*

0.921 ✔ **Answer:** .921

0.921

You have used 1 of 1 submissions