4-2) Big O Quiz

Due No due date **Points** 5 **Questions** 5 **Time Limit** None

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	2 minutes	0 out of 5

Score for this quiz: **0** out of 5
Submitted Sep 17 at 12:25pm
This attempt took 2 minutes.

Question 1 — 0 / 1 pts

Big O of delivering groceries to everyone in class?

- O(1)
- **ou Answered** O(log n)
- **orrect Answer** O(n)
- O(n^2)

Do something to everything

Question 2

0 / 1 pts

Big O of grocery delivery if a warehouse delivers to stores and the stores deliver to people?

- O(1)
- **ou Answered** O(log n)
- **orrect Answer** O(n)
- O(n^2)

This looks like n^2, huh. But the action being taken is a delivery to a person. Still O(n). Even if you counted warehouses as doing deliveries to stores, that is still just O(m+n). Add one person, add one delivery.

If each store only carried one thing, so each person gets a bread delivery from bread store and a pop-tart delivery from pop-tart store, that would be n^2. Add a person and every store has to do one more delivery. Like shaking hands.

Question 3

0 / 1 pts

I pick a number between 1 and 100. You guess, and I tell you if the correct number is higher or lower. Big O of this?

- O(1)

orrect Answer

O(log n)

O(n)

ou Answered

O(n^2)

Whenever you think "half", think log. If you guess 50 and I say higher, you never have to guess 1-49. Each guess is cutting the potential numbers in half.

If I said the number is between 1-200, that would take just one more guess. Start at 100, and then is is the previous example.

Log n goes up by one whenever the input doubles.

Question 4

0 / 1 pts

Big O of a fire drill?

orrect Answer

O(1)

O(log n)

O(n)

ou Answered

O(n^2)

100 people in the building, one drill. 200 people in the building, one drill.

Question 5

0 / 1 pts

Big O of spreading chicken pox if every person gives it to two other people every day?

- O(1)
- O(log n)

orrect Answer

- O(n)
- O(n^2)

ou Answered

- O(2^n)

Tempting to click exponential there since I added it. But the action is spreading chicken pox. 5 people give to 10. 15 give to 30. 45 give to 90. That's exponential?

But the question isn't about how many people have it. The question is how many people got it. 10 people make 20 sick. Add one person, two more people get sick. O(2n), but constants don't count so it is O(n).

Quiz Score: **0** out of 5