Tucson International Academy

Academia Internacional de Tucson

Homework Packet for Twelveth Grade

Week 34

Name_____

Week Starts on/ Due on _____

Each week you are to complete your homework packet and turn it on the day the teacher assigns. Part of the homework is reading 45 minutes a day. This can be done in after school care and they can read to a younger sibling or an adult as well. Weekend reading is encouraged, each week students can get credit for reading on Saturday and/or Sunday. Reading each day is very important to help each student get better at this skill.

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Weekly Home Reading Record

Day	Reading Material	Amount of Time	How many pages
Weekend			
Monday			
Tuesday			
Wednesday			
Thursday			

Total Time Reading: Hours_____ Minutes_____

Student Signature_____ Date_____

Parent Signature_____ Date_____

Questions 12-22 are based on the following passage.

Tiny Exhibit, Big Impact

— 1 —

The first time I visited the Art Institute of Chicago, I expected to be impressed by its famous large paintings. 12 On one hand, I couldn't wait to view 13 painter, Georges Seurat's, 10-foot-wide *A Sunday Afternoon on the Island of La Grande Jatte* in its full size. It took me by surprise, then, when my favorite exhibit at the museum was one of 14 it's tiniest; the Thorne Miniature Rooms.

12

A) NO CHANGE
B) For instance,
C) However,
D) Similarly,

13

A) NO CHANGE
B) painter, Georges Seurat's
C) painter Georges Seurat's,
D) painter Georges Seurat's

14

A) NO CHANGE
B) its tiniest;
C) its tiniest:
D) it's tiniest,

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CONTINUE

— 2 —

Viewing the exhibit, I was amazed by the intricate details of some of the more ornately decorated rooms. I marveled at a replica of a salon (a formal living room) dating back to the reign of French king Louis XV. 15 Built into the dark paneled walls are bookshelves stocked with leather-bound volumes. The couch and chairs, in keeping with the style of the time, are characterized by elegantly curved arms and 16 legs, they are covered in luxurious velvet. A dime-sized portrait of a French aristocratic woman hangs in a golden frame.

— 3 —

This exhibit showcases sixty-eight miniature rooms inserted into a wall at eye level. Each furnished room consists of three walls; the fourth wall is a glass pane through which museumgoers observe. The rooms and their furnishings were painstakingly created to scale at 1/12th their actual size, so that one inch in the exhibit correlates with one foot in real life. A couch, for example, is seven inches long, and 17 that is based on a seven-foot-long couch. Each room represents a distinctive style of European, American, or Asian interior design from the thirteenth to twentieth centuries.

15

At this point, the writer is considering adding the following sentence.

> Some scholars argue that the excesses of King Louis XV's reign contributed significantly to the conditions that resulted in the French Revolution.

Should the writer make this addition here?

A) Yes, because it provides historical context for the Thorne Miniature Rooms exhibit.

B) Yes, because it explains why salons are often ornately decorated.

C) No, because it interrupts the paragraph's description of the miniature salon.

D) No, because it implies that the interior designer of the salon had political motivations.

16

A) NO CHANGE

B) legs, the couch and chairs

C) legs and

D) legs,

17

Which choice gives a second supporting example that is most similar to the example already in the sentence?

A) NO CHANGE

B) a tea cup is about a quarter of an inch.

C) there are even tiny cushions on some.

D) household items are also on this scale.

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CONTINUE

— 4 —

The plainer rooms are more sparsely 18 furnished. Their architectural features, furnishings, and decorations are just as true to the periods they represent. One of my favorite rooms in the whole exhibit, in fact, is an 1885 summer kitchen. The room is simple but spacious, with a small sink and counter along one wall, a cast-iron wood stove and some hanging pots and pans against another wall, and 19 a small table under a window of the third wall. Aside from a few simple wooden chairs placed near the edges of the room, the floor is open and obviously well worn.

18

Which choice most effectively combines the sentences at the underlined portion?

A) furnished by their
B) furnished, but their
C) furnished: their
D) furnished, whereas

19

Which choice most closely matches the stylistic pattern established earlier in the sentence?

A) NO CHANGE
B) a small table is under the third wall's window.
C) the third wall has a window and small table.
D) the third wall has a small table against it and a window.

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CONTINUE

— 5 —

As I walked through the exhibit, I overheard a 20 visitors' remark, "You know, that grandfather clock actually runs. Its glass door swings open, and the clock can be wound up." 21 Dotted with pin-sized knobs, another visitor noticed my fascination with a tiny writing desk and its drawers. "All of those little drawers pull out. And you see that hutch? Can you believe it has a secret compartment?" Given the exquisite craftsmanship and level of detail I'd already seen, I certainly could.

Question 22 asks about the previous passage as a whole.

20

A) NO CHANGE
B) visitors remarking,
C) visitor remarked,
D) visitor remark,

21

A) NO CHANGE
B) Another visitor, dotted with pin-sized knobs, noticed my fascination with a tiny writing desk and its drawers.
C) Another visitor dotted with pin-sized knobs noticed my fascination with a tiny writing desk and its drawers.
D) Another visitor noticed my fascination with a tiny writing desk and its drawers, dotted with pin-sized knobs.

Think about the previous passage as a whole as you answer question 22.

22

To make the passage most logical, paragraph 2 should be placed

A) where it is now.
B) after paragraph 3.
C) after paragraph 4.
D) after paragraph 5.

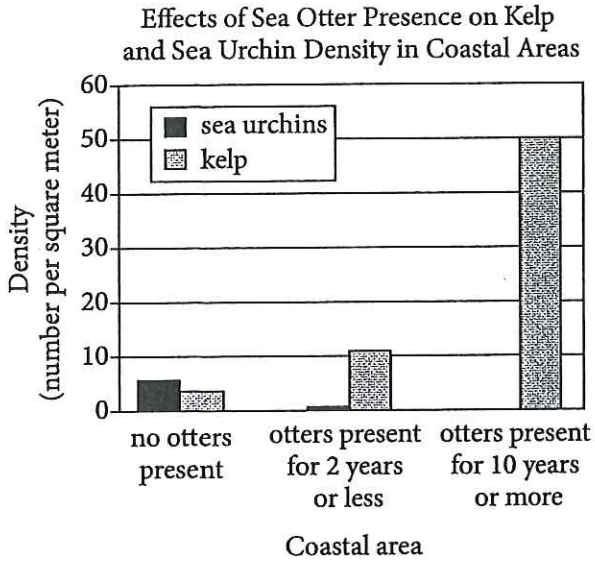
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CONTINUE

Questions 23-33 are based on the following passage and supplementary material.

Environmentalist Otters

It has long been known that the sea otters 23 living along the West Coast of North America help keep kelp forests in their habitat healthy and vital. They do this by feeding on sea urchins and other herbivorous invertebrates that graze voraciously on kelp. With sea otters to keep the population of sea urchins in check, kelp forests can flourish. In fact, 24 two years or less of sea otters can completely eliminate sea urchins in a coastal area (see chart).



Adapted from David O. Duggins, "Kelp Beds and Sea Otters: An Experimental Approach." ©1980 by the Ecological Society of America.

Without sea otters present, 25 nevertheless, kelp forests run the danger of becoming barren stretches of coastal wasteland known as urchin barrens.

23

A) NO CHANGE
B) living along the West Coast of North America, they help
C) that live along the West Coast of North America and help to
D) that live along the West Coast of North America, where they help

24

Which choice offers an accurate interpretation of the data in the chart?

A) NO CHANGE
B) even two years or less of sea otter presence can reduce the sea urchin threat
C) kelp density increases proportionally as sea urchin density increases
D) even after sea otters were present for ten years or more, kelp density was still lower than sea urchin density

25

A) NO CHANGE
B) however,
C) hence,
D) likewise,

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CONTINUE

[1] What was less well-known, until recently at least, was how this relationship among sea otters, sea urchins, and kelp forests might help fight global warming. [2] The amount of carbon dioxide in the atmosphere has increased 40 percent 26 . [3] A recent study by two professors at the University of California, Santa Cruz, Chris Wilmers and James Estes, 27 suggests, that kelp forests protected by sea otters can absorb as much as twelve times the amount of carbon dioxide from the atmosphere as those where sea urchins are allowed to 28 devour the kelp. [4] Like 29 their terrestrial plant cousins, kelp removes carbon dioxide from the atmosphere, turning it into sugar fuel through photosynthesis, and releases oxygen back into the air.

26

At this point, the writer is considering adding the following information.

> since the start of the Industrial Revolution, resulting in a rise in global temperatures

Should the writer make this addition here?

A) Yes, because it establishes the relationship between the level of carbon dioxide in the atmosphere and global warming.

B) Yes, because it explains the key role sea otters, sea urchins, and kelp forests play in combating global warming.

C) No, because it contradicts the claim made in the previous paragraph that sea otters help keep kelp forests healthy.

D) No, because it mentions the Industrial Revolution, blurring the focus of the paragraph.

27

A) NO CHANGE

B) suggests—that

C) suggests, "that

D) suggests that

28

A) NO CHANGE

B) dispatch

C) overindulge on

D) dispose of

29

A) NO CHANGE

B) they're

C) its

D) it's

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CONTINUE

[5] Scientists knew this but did not recognize 30 how large a role they played in helping kelp forests to significantly decrease the amount of carbon dioxide in the atmosphere. [6] Far from making no difference to the ecosystem, the presence of otters was found to increase the carbon storage of kelp forests by 4.4 to 8.7 megatons annually, offsetting the amount of carbon dioxide emitted by three million to six million passenger cars each year. 31

Wilmers and Estes caution, however, that 32 having more otters will not automatically solve the problem of higher levels of carbon dioxide in the air. But they suggest that the presence of otters provides a good model of how carbon can be sequestered, 33 or removed; from the atmosphere through the management of animal populations. If ecologists can better understand what kinds of impacts animals might have on the environment, Wilmers contends, "there might be opportunities for win-win conservation scenarios, whereby animal species are protected or enhanced, and carbon gets sequestered."

30

A) NO CHANGE
B) how large a role that it played
C) how large a role sea otters played
D) that they played such a large role

31

Where is the most logical place in this paragraph to add the following sentence?

What Wilmers and Estes discovered in their study, therefore, surprised them.

A) After sentence 1
B) After sentence 3
C) After sentence 4
D) After sentence 5

32

A) NO CHANGE
B) increasing the otter population
C) the otters multiplying
D) having more otters than other locations

33

A) NO CHANGE
B) or removed from,
C) or, removed from,
D) or removed, from

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CONTINUE

Pre-Calculus (12) Week 34

Name: Gary Young

#1 Points possible: 1. Total attempts: 1

You go to the doctor and he gives you 16 milligrams of radioactive dye. After 16 minutes, 7 milligrams of dye remain in your system. To leave the doctor's office, you must pass through a radiation detector without sounding the alarm. If the detector will sound the alarm if more than 2 milligrams of the dye are in your system, how long will your visit to the doctor take, assuming you were given the dye as soon as you arrived? Give your answer to the nearest minute.

You will spend _____ minutes at the doctor's office.

#2 Points possible: 1. Total attempts: 1

The half-life of Radium-226 is 1590 years. If a sample contains 300 mg, how many mg will remain after 3000 years?

_____ mg

Give your answer accurate to at least 2 decimal places.

#3 Points possible: 1. Total attempts: 1

At the beginning of an experiment, a scientist has 136 grams of radioactive goo. After 165 minutes, her sample has decayed to 4.25 grams.

What is the half-life of the goo in minutes? _____

Find a formula for $G(t)$, the amount of goo remaining at time t. $G(t) =$ _____

How many grams of goo will remain after 17 minutes? _____

#4 Points possible: 1. Total attempts: 1

The doubling period of a baterial population is 10 minutes. At time $t = 120$ minutes, the baterial population was 60000.

What was the initial population at time $t = 0$? _____

Find the size of the baterial population after 3 hours. _____

#5 Points possible: 1. Total attempts: 1

Find the time required for an investment of 5000 dollars to grow to 6300 dollars at an interest rate of 7.5 percent per year, compounded quarterly.
Your answer is $t =$ _____ years.
