

- 1) 1 2) 2 3) 3 4) 1 5) 3
 6) 2 7) 3 8) 2 9) 4 10) 1
 11) 2 12) 3 13) 1 14) 4 15) 1

16) No

SAMPLE ANSWERS: No... the results for females were higher than for males after walking. OR ...the results in the graph are averages of all the males and all the females. Some males could have much lower rates or some females could have much higher rates. OR ...the relative numbers of males and females were not graphed. It could have been 1 male and 27 females. OR ...the sample size is too small to support this conclusion.

Pulse Rate After Activity

Trial	20-Second Pulse Counts	Pulse/Min
1	23	69
2	26	78
3	21	63
Average		70

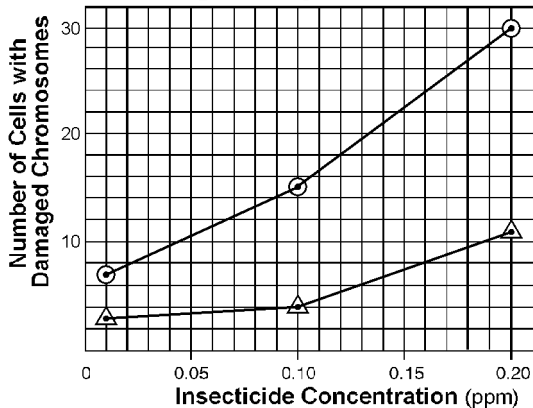
17)

- 18) 2 19) 1 20) 1 21) 4

22) SAMPLe ANSWERS: The pH decreased. OR The lakes became more acidic. OR The pH dropped from about 6.8 to about 4.8.

23) SAMPLe ANSWERS: Their populations decreased. OR Their survival rate decreased. OR There are not as many trout, bass, and mussels. OR They died.

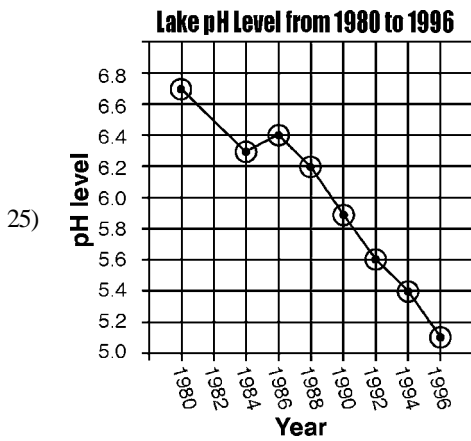
Cell Damage After Exposure to Insecticide



24) (a-c)

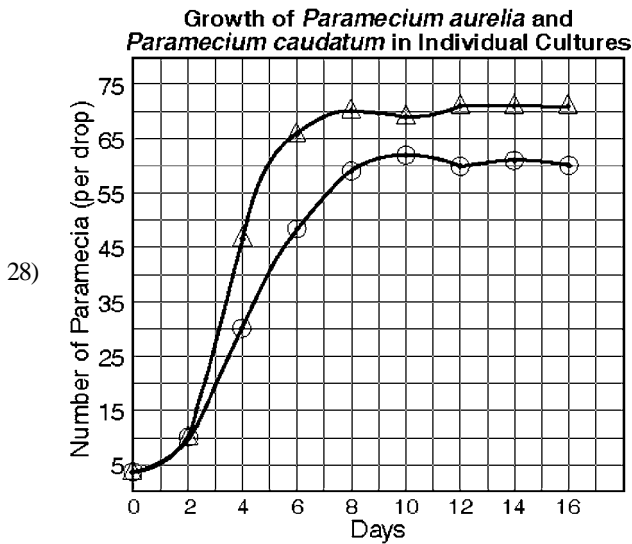
(d) Methyl parathion

SAMPLe ANSWERS: The line on the graph for methyl parathion is higher than for malathion. OR At 0.2 ppm, methyl parathion damaged chromosomes in 30 cells and malathion damaged chromosomes in only 11. OR The data table shows more chromosome damage from methyl parathion at every concentration.



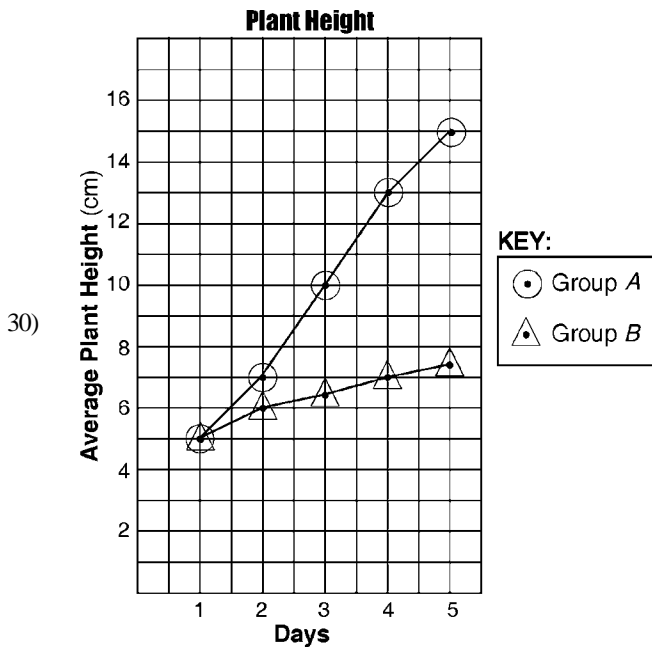
26) SAMPLE ANSWERS: The pH level decreased over this time period. OR The acid level increased over this time period.

27) SAMPLE ANSWERS: water depth OR time of year OR The sample should be taken under similar weather conditions. OR The sample should be taken from the same site.

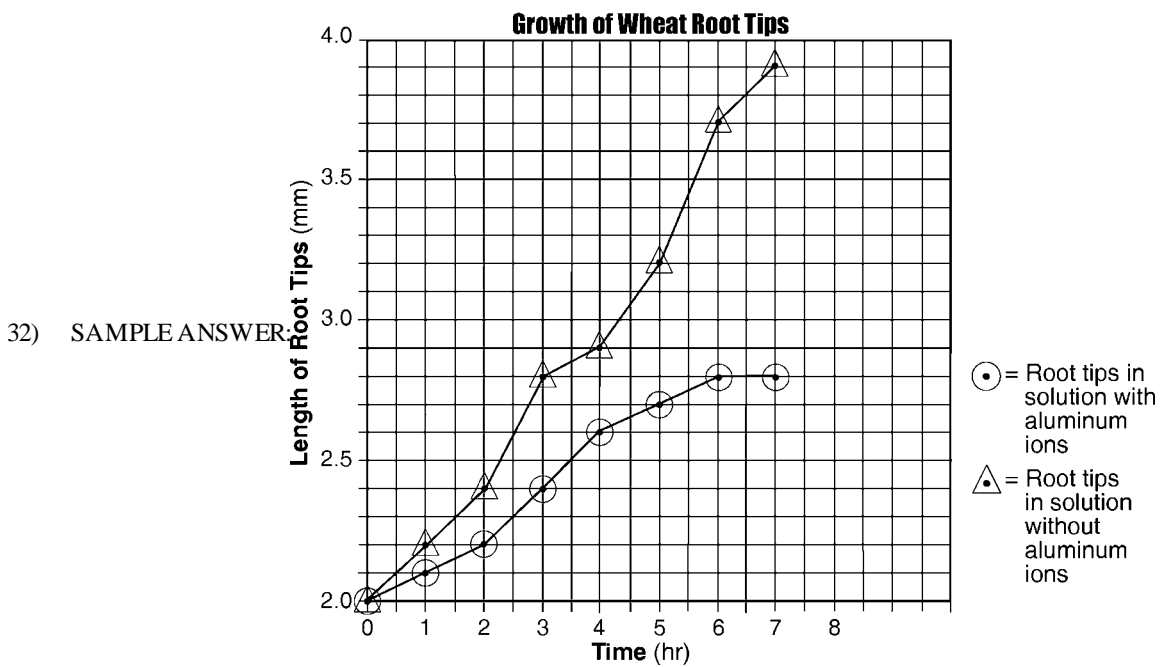


29) SAMPLE ANSWER:

- (a) Both populations increased in number. OR The population of *Paramecium aurelia* increased at a slightly greater rate than *Paramecium caudatum*;
- (b) *Paramecium aurelia* grows (reproduces) faster than *Paramecium caudatum*. OR *Paramecium aurelia* is better adapted to the environment than *Paramecium caudatum*.



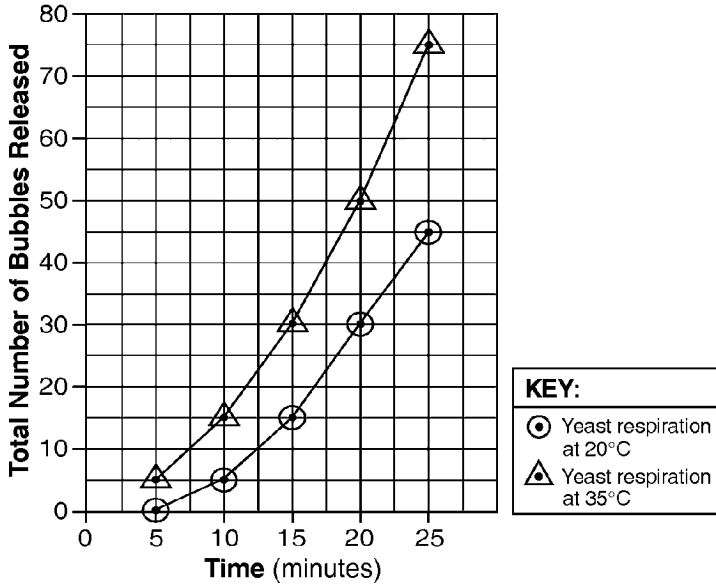
31) SAMPLE ANSWER: Bean plants given gibberellic acid grew taller or faster than those that were not.



33) SAMPLE ANSWERS: Root tips grow less when exposed to aluminum ions. OR The growth of the root tips was stunted. OR Without aluminum ions, the root tips grow more.

34) SAMPLE ANSWER:

Effect of Temperature on Yeast Respiration

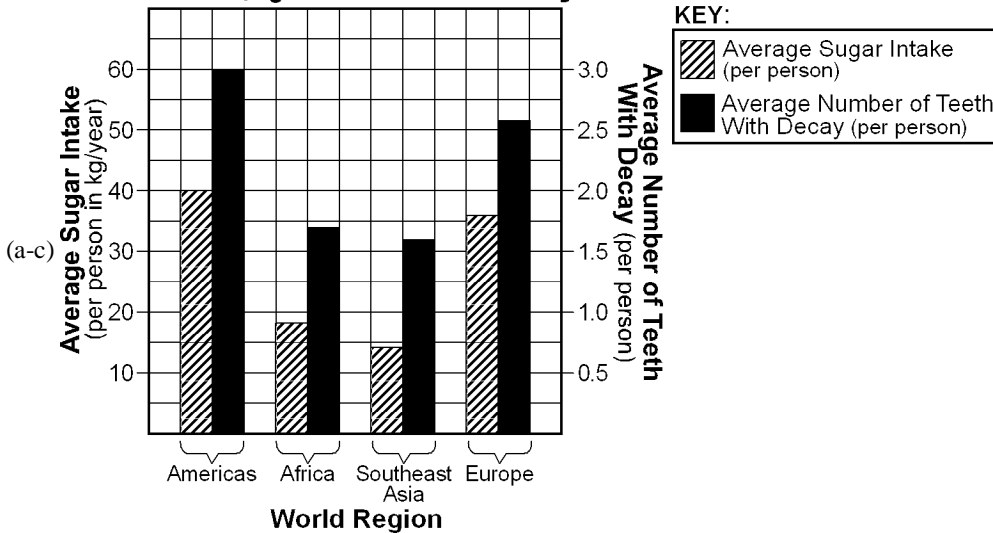


35) SAMPLE ANSWERS: As the temperature increases, the gas production increases. OR As temperature changes from 35°C to 20°C, the gas production decreases. OR There is a direct relationship.

36) CO₂ OR carbon dioxide

37) SAMPLE ANSWER:

Effect of Sugar Intake on Tooth Decay



38) 2 39) 4 40) 1 41) 3 42) 1

43) 3 44) 3 45) 4 46) 2 47) 4

48) 2