SCIENTIFIC METHOD

Name _____

Put the following steps of the scientific method in the proper order.

_____ Research the problem.

_____ Observe and record.

_____ Make a hypothesis.

_____ Identify the problem.

_____ Arrive at a conclusion.

_____ Test the hypothesis.

Match the following terms with the correct definition.

_____ 1. hypothesis

_____ 2. control

_____ 3. variable

_____ 4. experiment

_____ 5. conclusion

_____ 6. theory

_____ 7. data

a) organized process used to test a hypothesis

b) an educated guess about the solution to a problem

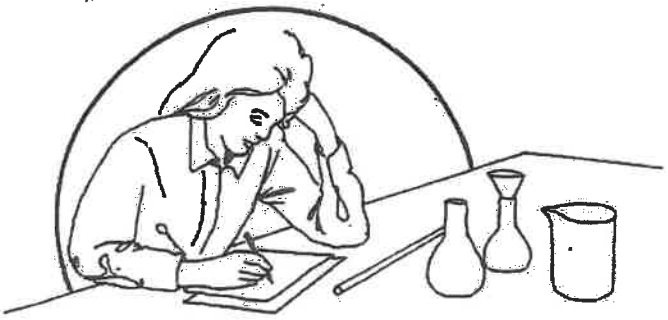
c) observations and measurements recorded during an experiment

d) a judgment based on the results of an experiment

e) a logical explanation for events that occur in nature

f) used to show that the result of an experiment is really due to the condition being tested

g) factor that changes in an experiment



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SCIENTIFIC NOTATION / SIGNIFICANT FIGURES

Scientific Notation

Use the space provided to write the given values in Scientific Notation, be sure to only include significant figures in your answer.

1.) 678.9 _____ 2.) 0.009107 _____

3.) 18 _____ 4.) 1997.82 _____

5.) 0.00000602 _____

Re-write the values that are expressed in Scientific Notation into their original form.

6.) 4.3×10^{-4} _____ 7.) 1×10^{0} _____

8.) 2.809×10^{5} _____ 9.) 1.008×10^{-8} _____

10.) 1.5×10^{-6} _____

Identify the number of significant figures in the following values.

11.) 467221 _____ 12.) 0.000160008 _____ 13.) 37.7 _____

14.) 1.00000 _____ 15.) 2.00022 _____ 16.) 0.000015 _____

17.) 80000008 _____ 18.) 100000000000000 _____ 19.) 1111110 _____

20.) 7700770 _____

Report the answer to the following number of problems with a.) the correct number of significant figures, then b.) convert the answer to scientific notation as well.

21.) 67.34 X 0.894 a.)_____ b.)_____

22.) 54.9801 ÷ 17.5 a.)_____ b.)_____

23.) 18.881 + 76.3 a.)_____ b.)_____

24.) 21.53 – 7.2 a.)_____ b.)_____

25.) 9885 – 34.22 a.)_____ b.)_____

26.) 12.04 + 17.9 a.)_____ b.)_____

27.) 555.2 + 0.00381 a.)_____ b.)_____

28.) 51.09 X 3.3 a.)_____ b.)_____

29.) 1.001 X 4.004 a.)_____ b.)_____

30.) 622 + 799 a.)_____ b.)_____

The data table below shows how well enzymes function at different temperatures.

Temperature °C	Enzyme Activity
0	0
20	10
30	15
40	20
50	8
60	5
70	0

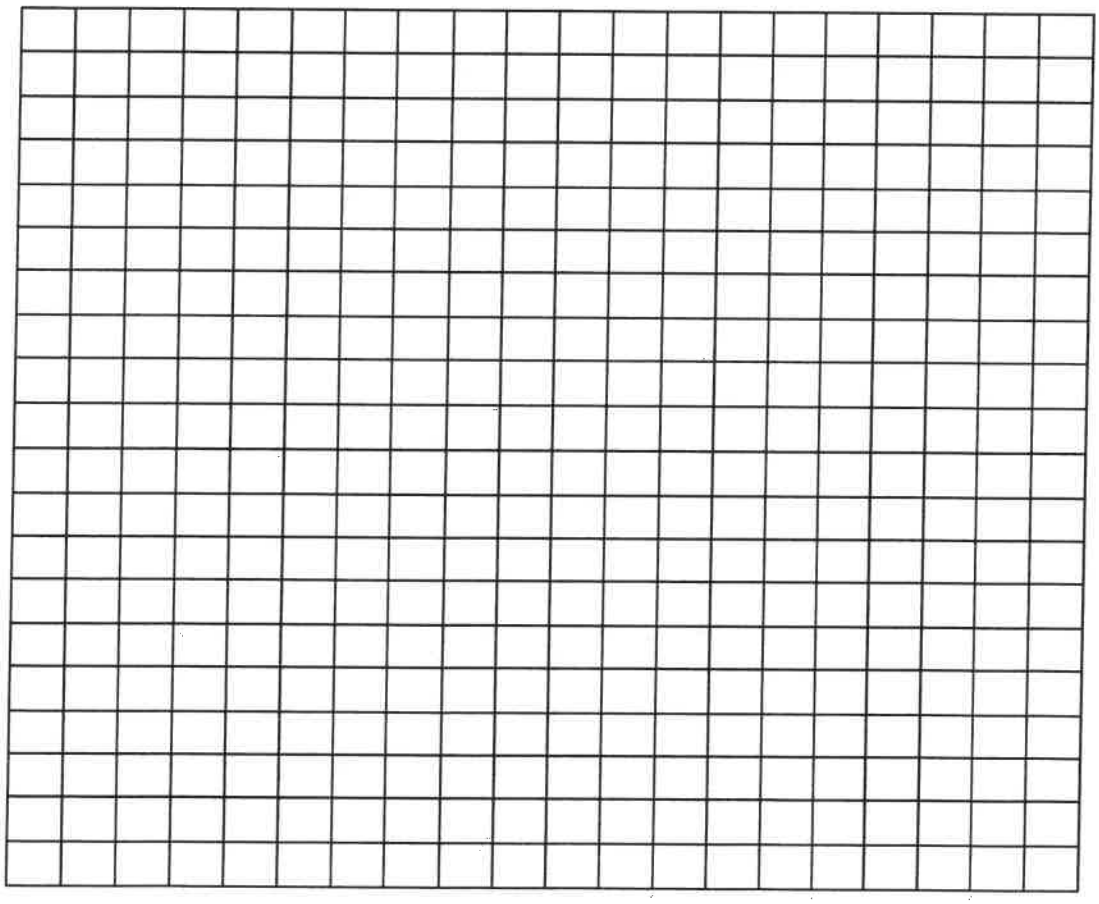
1. What is the independent variable?

_____

2. What is the dependent variable?

_____

3. Using the information in the data table, construct a line graph



4. What is the optimum temperature for this enzyme?