1. How many significant digits are in the following measurements?

   a. 1300 m 2

   b. 3.20 g 3

   c. 0.00065 km 2

   d. 20 Fir trees infinite

   e. 30 ml 1

   f. 30. ml 2

   g. 30.0 ml 3

2. Write the term that corresponds to the following definitions:

   a. Describes evidence that documents only what actually happened as exactly as possible

      objective

   b. Variable that you (the experimenter) change in an experiment

      independent

   c. Meaningful digits in a measured quantity

      significant digits

   d. Application of science to meet human needs and solve problems

      engineering

   e. Amount of space between 2 points

      distance

   f. Smallest interval that can be measured

      resolution

   g. Measuring system used for everyday measurements in the U.S.

      English

   h. Process of learning – begins with hypothesis & proceeds to prove or change it by comparing it to scientific evidence

      scientific method

   i. Figure something out from known facts using logical thinking

      deduce

j. Evidence than can be seen independently by others if they repeat the same experiment or observation in the same way

repeatable

k. Professional who uses scientific knowledge to create or improve inventions to solve problems or meet human needs

engineer

l. Group of variables that are related

system

m. Variable kept constant in an experiment

control

n. Determination of the amount of something

measurement

o. How close together or reproducible repeated measurements are

precision

p. How close a measurement is to the accepted or true value

accuracy

q. Fixed amount of something

unit

r. Working model of a design that can be tested

prototype

s. Situation specifically set up to investigate relationships between variables

experiment

t. Factor that affects how an experiment works

variable

u. Each time an experiment is tried

trial

v. Possible explanation of observations – can be tested by comparison to scientific evidence

hypothesis

w. Scientific explanation supported by a lot of evidence collected over a long period of time

theory

x. Describes evidence that documents only what actually happened as exactly as possible

y. Process of learning that starts with asking questions, proceeds by seeking answers to questions

scientific method

z. Theory that's been tested many times without any contradictions

law

aa. Measured distance

length

bb. Basic SI unit of length

meter

cc. Basic SI unit of mass

gram

dd. Basic SI unit of liquid volume

liter

ee. Visual representation of data

graph

ff. 1 variable increases with an increase in another variable

direct relationship

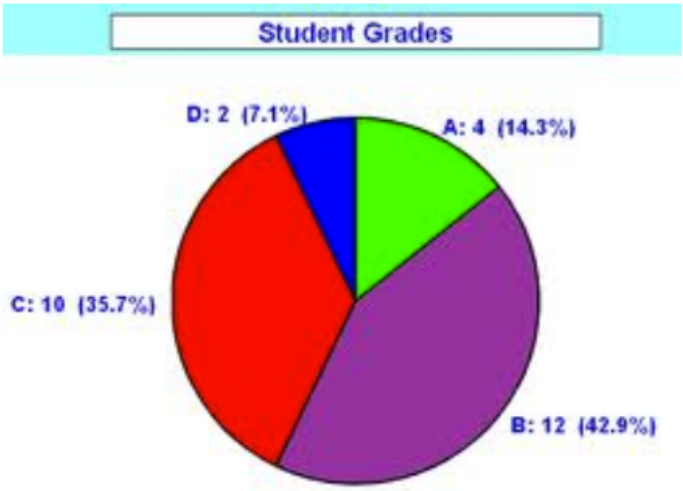
gg. 1 variable decreases when another variable increases

inverse relationship

kk. 1 variable decreases when another variable increases

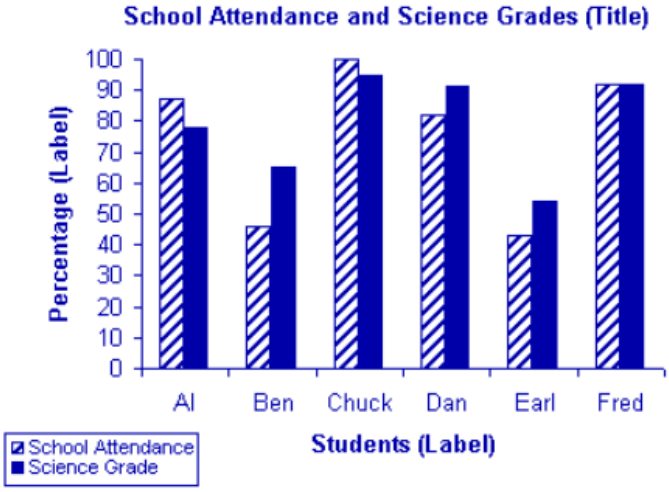
4. What type of graph is illustrated below? What kind of data is shown in this type of graph?

pie chart – how a whole is divided into parts



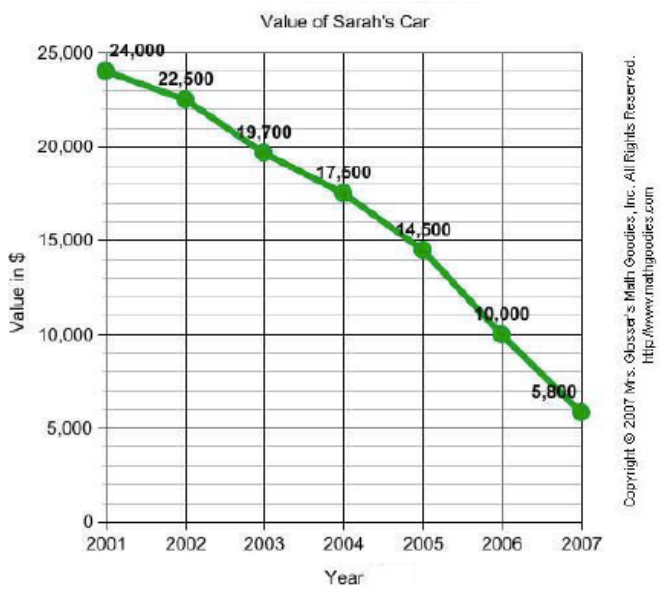
5. What type of graph is illustrated below? What kind of data is shown in this type of graph?

Bar graph – compare groups of data



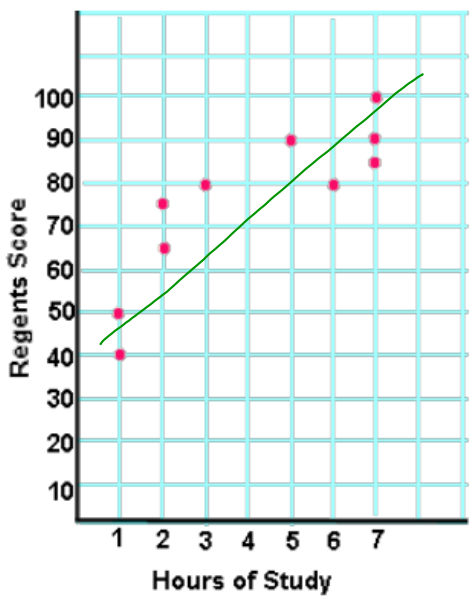
6. What type of graph is illustrated below? What kind of data is shown in this type of graph?

line graph - shows how a variable changes over time



7. What type of graph is illustrated below? What kind of data is shown in this type of graph?

scatter plot - shows if there's a relationship between them.



8. Make the following conversions:

a. 8550 mm = 8.55 m

b. 0.3 cm = 3 mm

c. 9450 g = 9.45 kg

d. 800 mg = 0.8 g

e. 150 mL = 0.15 L

f. 0.00065 km = 650 mm

9. Which is largest? (circle the correct answer)

Millimeter decimeter Dekameter centimeter

10. Are scientific theories unchangeable? Why or why not?

NO – can be change if new evidences requires it.

11. What is the most important tradition in science?

truthful reporting