

Kingsborough Community College
2001 Oriental Blvd.
Brooklyn, New York 11235

HSE51/KS11 – Lesson # 7

Professor Toro

Subject: Writing (74 – 77)

Topic – Word Choice, Defining a word using Content

Writers are very careful when choosing words in their piece of writing. The use of connotation is very important. The positive and negative association to writer's work.

Definitions:

Figurative Language- means to make their writing vivid to the reader. These are the common:

- Simile – compare two things another, using the words ***like or as***.
- Metaphor – an indirect comparison between two things.(***using verbs***)
- Personification – the use of animals portraying humans and things/objects that are not alive

Defining a Word using Context

Writers identify the meaning of a word by using ***context clues***. They are hints placed in a sentence, paragraph, etc. to help the reader understand the connection/relationship of a word, and will also indicate if the word or words are in a positive or negative connotation.

Why are context clues important?

Context clues help you understand the meaning of words and helps you with comprehension, when reading a piece of writing. It also helps build vocabulary, and helps people to become better readers.

Writer's Tone and Point of View

Definitions;

Tone – the meaning of ***tone***, is the writer's ***attitude*** in a piece of writing. You can decipher the tone of a writer by the choice of words/syntax that he/she uses when writing. The tone is his/her expression, and emotions through description, that allows the reader, or viewer to feel what is happening along the story. It allows you to feel that you are part of the scene.

Point of View – Is the diction and the formality in a piece of writing. There are three types of point of view:

- ***First person point of view – stories and novels are written in 1st person point of view, where we can see the inside the character's eyes.(I, me, mine, myself, we, our, ourselves)***

- **Second person point of view – Is the perspective of the narrator telling the story. (you, yourself, your, yours or yourselves)**
- **Third person point of view – author knows all in the story and narrates the story about the characters. (he, him, himself, she, her, hers, it, its, itself, them, their, theirs, themselves, etc.)**

What is the purpose of point of view?

It helps the readers understand the story, character's feelings and emotions.
Writers are able to review/criticize someone's work, in a positive or negative connotation.

Subject: Science (552 - 557)

Topic: Atoms, Elements and the Periodic Table, Atomic Bonds

Definitions:

Periodic Table – is a chart that contains elements. They are all arranged in order, by its **atomic number and its atomic weight**. Each element has a **chemical symbol**. When atoms combine they form molecules. When elements combine with other elements, they are known as **compounds**. Each compound is represented by a formula. When substances combine they are known as **mixtures**.

There are two types of mixtures.

- heterogeneous – mixture not completely blended – guacamole
- homologous – mixture that blends evenly – coffee and milk, water and sugar

When mixtures blend easily it is known as a **solution**.

Scientists:

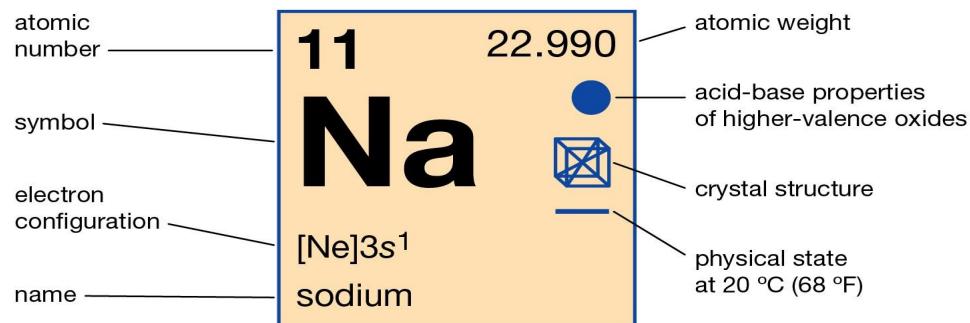
Dimitri Mendeleev was a Russian Chemist and teacher, who created the Periodic Table. He arranged them in order according to its atomic number and atomic weight. He created the Table to make a clear idea of the physical and chemical properties that are so important in science.

Another scientist that also did experiments with the periodic table was **Ernest Rutherford**. He did experiments, using the element of gold foil. As a result was able to determine that particles scatters around, which means that atoms surround the nucleus.

Niel Bohr - He created a model using the element of hydrogen. His greatest contribution was to be able to understand the atomic structure and quantum theory, (states that energy is transferred in quantities) which he later received a Nobel Prize.

Example: NaCl – Chemical Formula ----- Na + Cl --- = Sodium Chloride (name) = Salt

Sodium



	Alkali metals		Solid
	Body-centred cubic		Strongly basic

© Encyclopædia Britannica, Inc.

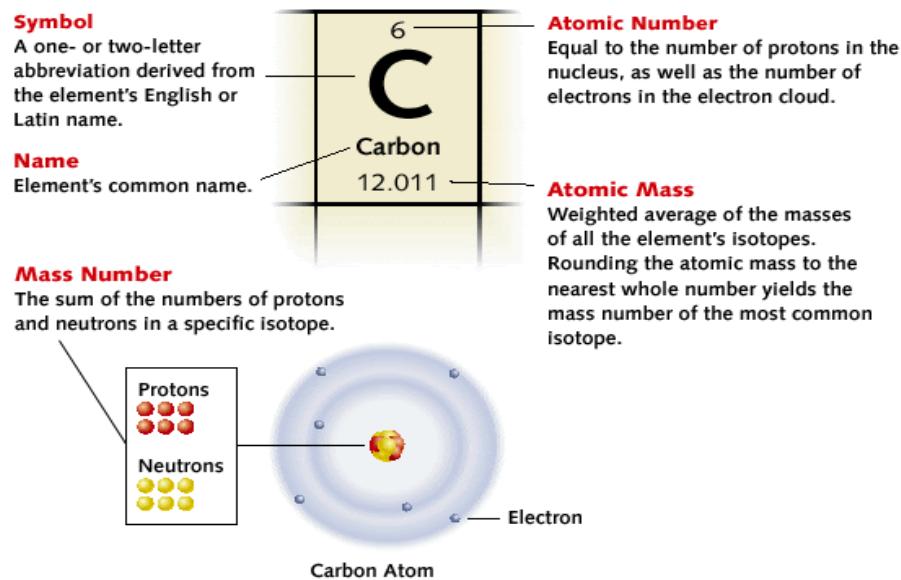
The Periodic Table of Elements																	
1 H 1.008 Hydrogen	2 He 4.003 Helium	3 Li 6.94 Lithium	4 Be 9.012 Boron	5 B 10.811 Boron	6 C 12.011 Carbon	7 N 14.007 Nitrogen	8 O 15.999 Oxygen	9 F 18.998 Fluorine	10 Ne 20.180 Neon	11 Na 22.990 Sodium	12 Mg 24.320 Magnesium	13 Al 26.982 Aluminum	14 Si 28.998 Silicon	15 P 30.974 Phosphorus	16 S 32.066 Sulfur	17 Cl 35.453 Chlorine	18 Ar 39.949 Argon
19 K 39.098 Potassium	20 Ca 40.084 Calcium	21 Sc 44.944 Scandium	22 Ti 45.987 Titanium	23 V 50.944 Vanadium	24 Cr 51.996 Chromium	25 Mn 54.938 Manganese	26 Fe 55.845 Iron	27 Co 58.933 Cobalt	28 Ni 58.693 Nickel	29 Cu 63.547 Copper	30 Zn 65.438 Zinc	31 Ga 69.724 Gallium	32 Ge 72.633 Germanium	33 As 74.922 Arsenic	34 Se 78.972 Selenium	35 Br 80.915 Bromine	36 Kr 83.813 Krypton
37 Rb 82.904 Rubidium	38 Sr 87.628 Strontium	39 Y 88.906 Yttrium	40 Zr 91.224 Zirconium	41 Nb 92.906 Niobium	42 Mo 95.979 Molybdenum	43 Tc 98.967 Technetium	44 Ru 101.07 Ruthenium	45 Rh 102.966 Rhodium	46 Pd 104.42 Palladium	47 Ag 107.058 Silver	48 Cd 112.412 Cadmium	49 In 114.818 Indium	50 Sn 118.711 Tin	51 Sb 121.760 Antimony	52 Te 127.6 Tellurium	53 I 126.904 Iodine	54 Xe 131.204 Xenon
55 Cs 132.915 Cesium	56 Ba 137.328 Barium	57 Hf 178.49 Hafnium	58 Ta 180.948 Tantalum	59 W 183.84 Tungsten	60 Os 186.207 Osmium	61 Ru 190.217 Ruthenium	62 Ir 192.217 Iridium	63 Pt 195.085 Platinum	64 Au 196.967 Gold	65 Hg 200.592 Mercury	66 Tl 204.383 Thallium	67 Pb 207.2 Lead	68 Bi 208.985 Bismuth	69 Po 208.942 Polonium	70 Rn 222.028 Radium		
87 Fr 223.018 Francium	88 Ra 226.028 Radium	89-10.5 Rf 227.028 Rutherfordium	104 Db 229.028 Dubnium	105 Sg 231.028 Seaborgium	106 Bh 232.028 Bohrium	107 Hs 233.028 Hassium	108 Mt 235.028 Moscovium	109 Ds 238.028 Darmstadtium	110 Rg 243.028 Rutherfordium	111 Cn 244.028 Copernicium	112 Nh 245.028 Nihonium	113 Fl 247.028 Florium	114 Mc 250.028 Meitnerium	115 Lv 251.028 Livermorium	116 Ts 252.028 Tennessine	117 Og 253.028 Oganesson	
57 La 133.905 Lanthanum	58 Ce 140.116 Cerium	59 Pr 140.988 Praseodymium	60 Nd 144.242 Neodymium	61 Pm 144.933 Promethium	62 Sm 150.36 Samarium	63 Eu 151.94 Europium	64 Gd 157.21 Gadolinium	65 Tb 158.925 Terbium	66 Dy 161.929 Dysprosium	67 Ho 164.939 Holmium	68 Er 167.239 Erbium	69 Tm 168.934 Thulium	70 Yb 173.955 Ytterbium	71 Lu 174.957 Lutetium			
89 Ac 227.028 Actinium	90 Th 232.028 Thorium	91 Pa 233.028 Protactinium	92 U 238.028 Uranium	93 Np 237.048 Neptunium	94 Pu 244.064 Plutonium	95 Am 243.061 Americium	96 Cm 247.079 Curium	97 Bk 247.079 Berkelium	98 Cf 251.060 Californium	99 Es 252.040 Einsteinium	100 Fm 257.099 Fermium	101 Md 258.1 Mendelevium	102 No 259.101 Nobelium	103 Lr 262.0 Lawrencium			

How many unpaired electrons are in the low-spin octahedral complex $[\text{Co}(\text{CN})_6]^{4-}$?

The numbers from left to right (1 – 18) are known as **Periods**. The **vertical columns are known as Groups**.

Each element has charges in its **Cloud**. (Nucleus)

- protons – positive charge
- electrons – negative charge
- neutrons – neutral no charge



Each orbit contains a dimensional *energy level*.

Level 1 = 2

Level 2 = 8

Level 3 = 18

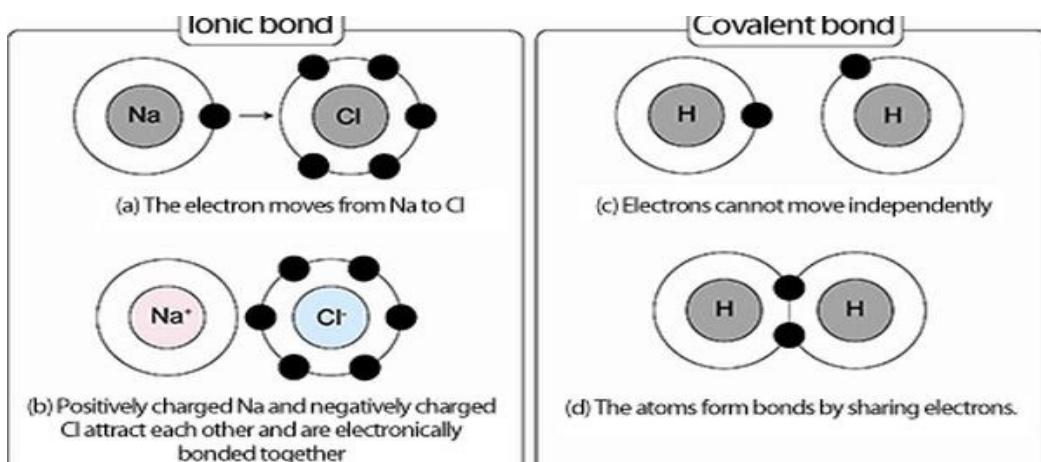
Level 4 = 32

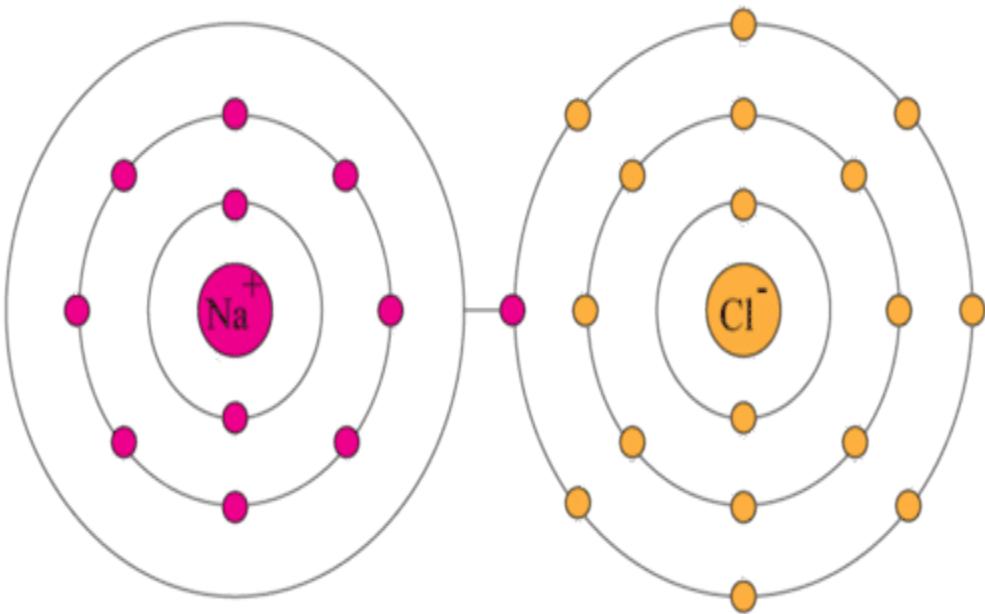
Atomic Bonds – is the process in which atoms *trade* electrons to form molecules. **In other words, the losing and gaining of an electron.**

Ionic Bond – in an ionic bond, one atom takes one or more electrons from another.

Covalent Bonds – bond between two elements that gain electrons.

Valence electron – is the last electron in the dimensional cloud, in which will share an electron with another element.





Subject: Math

Pages (394 – 399)

Topics: Geometry (Perimeter, Area, Circumference, Volume) formulas in different shapes.

Definitions:

Perimeter – is the sum/addition in length/distance of a closed shape.

Area – is the number of units in a dimensional shape.

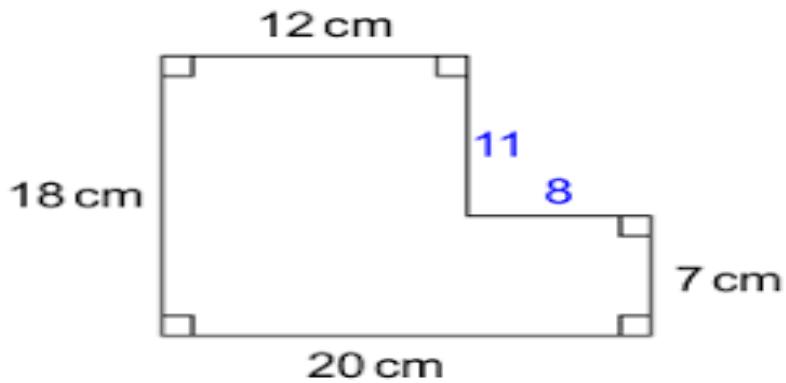
Circumference – is a curved closed shape, that begins in an endpoint and meets at the same close points.

It is the distance around or perimeter of a circle. The ratio of the circumference to the diameter of any circle is a constant value known as (“*pi*”)

The symbol for (*pi*) is (π) $\pi = (3.14 \text{ or } 22/7)$

Volume – is the amount of a tri-dimensional closed shape.

Formula for Perimeter is (**P**)



$$12 + 11 + 8 + 7 + 20 + 18 = 76 \text{ cm}$$

Formula for Area are:

Parallelogram $A = (l \times w)$

Formula for Area of a Triangle is $A = \frac{1}{2} (b \times h)$

Rectangle is $A = b \times h$ or $A = bh$

Formula Area for a **Square** is $A = s^2$

Formula for **Circumference** = $C = \pi d$ or $C = 2\pi r$ (d – diameter) (r – radius)

Formula for Area of a Circle = $A = \pi r^2$

Formula for Area of Irregular Figures = $A = (\frac{1}{2} bh) + s^2$

Formula for **Volume** = $l \times w \times h$

Formula for Volume of **Pyramids and Prisms**:

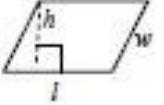
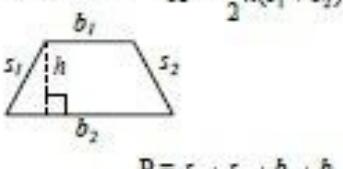
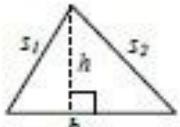
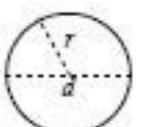
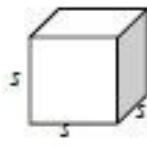
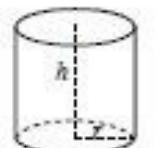
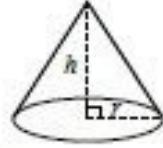
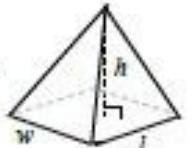
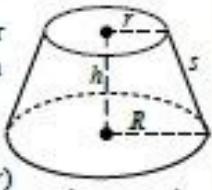
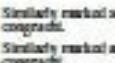
Rectangular Prism = $V = Bh$

Rectangular Pyramid = $V = \frac{1}{3} Bh$

Triangular Prism = $V = (\frac{1}{2} bh)$

Triangular Pyramid = $V = \frac{1}{3} Bh$

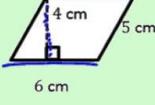
Geometry Formulas Sheet

Square  $A = s^2$ $P = 4s$	Rectangle  $A = lw$ $P = 2l + 2w$	Parallelogram  $A = lh$ $P = 2l + 2w$
Trapezoid  $A = \frac{1}{2}h(b_1 + b_2)$ $P = s_1 + s_2 + b_1 + b_2$	Triangle  $A = \frac{1}{2}bh$ $P = s_1 + s_2 + b$	Circle  $A = \pi * r^2$ $C = 2\pi * r$ or $C = \pi * d$
Rectangular Solid  $V = hwh$ $S = 2lh + 2wh + 2wl$	Cube  $V = s^3$ $S = 6s^2$	Right Circular Cylinder  $V = \pi * r^2h$ $S = 2\pi * rh + 2\pi * r^2$
Sphere  $V = \frac{4}{3}\pi * r^3$ $S = 4\pi * r^2$	Right Circular Cone  $V = \frac{1}{3}\pi * r^2h$ $S = \pi * r\sqrt{r^2 + h^2}$	Square or Rectangular Pyramid  $V = \frac{1}{3}lwh$
Right Circular Cone Frustum  $S = \pi * s(R+r)$ $V = \frac{\pi(r^2 + rR + R^2)h}{3}$	Geometric Symbols $\angle A$ angle A $\angle A = \angle B$ measure of angle A \overline{AB} line segment AB $\overline{AB} \parallel \overline{CD}$ line AB is parallel to line CD. $\overline{AB} \perp \overline{CD}$ line AB is perpendicular to line CD. $\angle A \cong \angle B$ Angle A is congruent to angle B. $\triangle A \sim \triangle B$ Triangle A is similar to triangle B. $\square ABCD$ rectangle ABCD $\square ABCD$ parallelogram ABCD	\overrightarrow{AB} vector AB $\angle A$ right angle $\overline{AB} \parallel \overline{CD}$ Line AB is parallel to line CD. $\overline{AB} \perp \overline{CD}$ Line AB is perpendicular to line CD. $\angle A \cong \angle B$ Angle A is congruent to angle B. $\triangle A \sim \triangle B$ Triangle A is similar to triangle B.  Similarly marked segments are congruent.  Similarly marked angles are congruent.

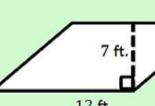
Examples:

Exercises

1. Find the area of each parallelogram below. Each figure is not drawn to scale.

a.  $A = bh$
 $A = 6 \cdot 4$
 $A = 24 \text{ cm}^2$

b.  $A = bh$
 $A = 25 \cdot 8$
 $A = 200 \text{ m}^2$

c.  $A = bh$
 $A = 12 \cdot 7$
 $A = 84 \text{ ft}^2$

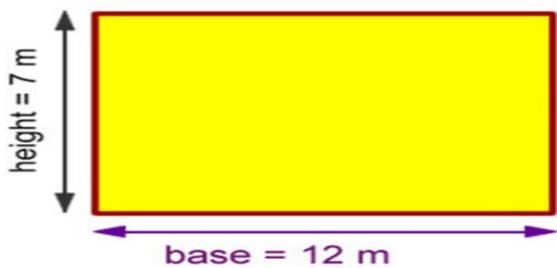
Extend Page

Examples:

Area of Rectangle

The area of a Rectangle equals the base times the height.

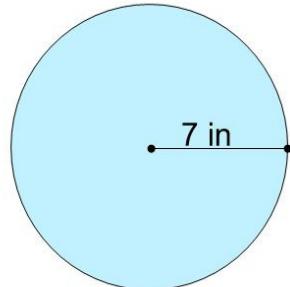
$$A = b \times h$$



$$\begin{aligned} A &= b \times h \\ A &= 12 \times 7 \\ A &= 84 \text{ m}^2 \end{aligned}$$

Area of a Circle

Example



Find the area of the circle.

Solution:

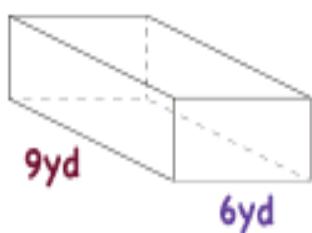
$$A = \pi(7^2) = 49\pi \text{ in}^2$$

or

$$A \approx 153.94 \text{ in}^2$$

Lesson 7.2 Area and Circumference

Find the Volume



$$V = Bh \quad (B = l \cdot w)$$

$$V = l \cdot w \cdot h$$

$$V = 9 \cdot 6 \cdot 4$$

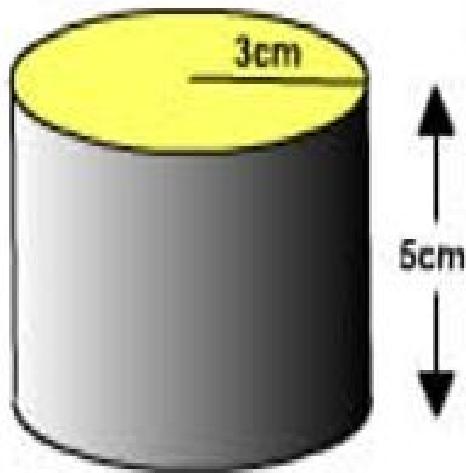
$$l = 9 \text{ yd}$$

$$V = 216$$

$$w = 6 \text{ yd}$$

$$h = 4 \text{ yd}$$

Volume of cylinders



$$\begin{aligned}\text{Volume} &= \pi r^2 h \\ &= \pi \times 3^2 \times 5 \\ &= \pi \times 9 \times 5 \\ &= 141.37 \text{ cm}^3\end{aligned}$$

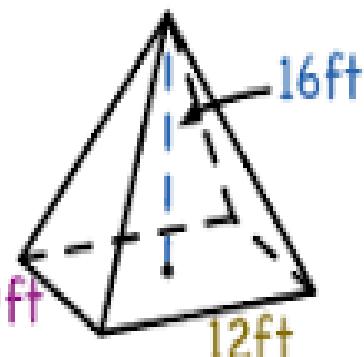
Find the Volume:

$$V = \frac{1}{3} B h$$

$$B = (L \times W)$$

$$V = \frac{1}{3} (L \times W) h = \frac{1}{3} (12 \times 9) 16 = \frac{1}{3} (108) 16$$

$$V = \frac{1}{3} (1728) = \frac{1728}{3} = 576$$



$$L = 12 \text{ ft}$$

$$W = 9 \text{ ft}$$

$$h = 16 \text{ ft}$$

Bb 12-5_Volumes_of_Pyramids_and_Cones X +

← → C 🔒 brentoncityschools.org/cms/lib/AL01901380/Centricity/Domain/133/12-5_Volumes_of_Pyramids_and_Cones.pdf

12-5 Volumes of Pyramids and Cones

4. a square pyramid with a height of 14 meters and a base with 8-meter side lengths

SOLUTION:

The volume of a pyramid is $V = \frac{1}{3}Bh$, where B is the area of the base and h is the height of the pyramid. The base of this pyramid is a square with sides of 8 meters. The height of the pyramid is 14 meters.

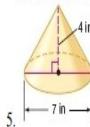
$$V = \frac{1}{3}Bh$$

$$= \frac{1}{3}(8 \times 8)14$$

$$\approx 298.7 \text{ m}^3$$

ANSWER:
298.7 m^3

Find the volume of each cone. Round to the nearest tenth.

5. 

SOLUTION:

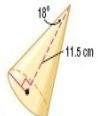
The volume of a circular cone is $V = \frac{1}{3}\pi r^2 h$, or

$$V = \frac{1}{3}\pi r^2 h$$

$$= \frac{1}{3}\pi(7^2)(4)$$

$$\approx 175.9 \text{ in}^3$$

ANSWER:
175.9 in^3

6. 

SOLUTION:

Use trigonometry to find the radius r .

$$\tan 18^\circ = \frac{r}{11.5}$$

$$r = 11.5 \tan 18^\circ$$

The volume of a circular cone is $V = \frac{1}{3}\pi r^2 h$, or

$$V = \frac{1}{3}\pi r^2 h$$

$$= \frac{1}{3}\pi(1.5 \tan 18^\circ)^2(11.5)$$

$$\approx 168.1 \text{ cm}^3$$

ANSWER:
168.1 cm^3

Type here to search

9:12 AM 10/24/2020

Subject: Social Studies (456 - 459) and watching a Video

The US Federal government is made of three branches, which are:

- Executive Branch
- Legislative Branch
- Judiciary Branch

These branches are to protect the rights' of the citizens, and to maintain the balance/limit of its power.

Executive - Carries out the laws (president, vice-president, cabinet, federal agencies)

Legislative – Consists of two houses (Congress) the Senate and the House of Representatives – Make the laws.

Judiciary – Federal court system, Supreme Court

Exercise Practice

Kingsborough Community College
2100 Oriental Blvd.
Brooklyn, New York 11235

KSE51/KS11 – Lesson # 7

Name: _____
Professor Toro

Writing/Reading

Based on yesterday's class lesson. Word Choice and Defining Word Content. Write a story using the concepts of vivid words, figurative language in your story. Remember to follow the guidelines taught in class. ***Make sure it's your original work.***

The topic you will write about is “Sacrifices.”

Science

Answer the following questions about the Periodic Table, Elements and Atoms.

1. What is the importance of the Periodic Table? Explain in detail.
2. What is the difference between homologous and heterogeneous mixtures? Give at least 5 examples.
3. Explain in detail how an element can lose or gain an electron. What are they known as?
4. What is the difference between a substance, a solution and a mixture?
5. Explain how elements in the Periodic Table are classified.
6. Dimitri Mendeleev created the Periodic Table. Who were other scientists who contributed to the structure of atoms? Write a brief summary.
7. What is the difference between atomic mass and atomic weight?
8. What are valence electrons, covalent bonds? Explain how they work on elements.

Math – Concepts: Area, Perimeter, Circumference, Volume Pyramids and Cones. (Problem Solving)

1. How many ways can eight squares 2 cm on a side be arranged to form a rectangle with a perimeter of 24 cm?
2. Twelve liters of water are needed to irrigate each hectare of a cornfield 2.75 hm wide and 3.5

hm long. How many liters will be used to water the entire field?

3. How many square meters of canvas are needed to make a triangular sail 7 meters along the base and 6 meters high?
4. A metal pipe has an outside diameter of 40 cm. If the metal is 6 cm thick, find the circumference of the pipe.
5. Find the volume of a box 78 in. long, 2 ft wide, and 56 in tall.
6. Mike and Bob pitched a pyramid-shaped tent that covered an area of 11 square yards. If the tent was 1.5 yards high, what was its capacity? (volume)

Social Studies

Essay Questions. ***Make sure it's your original work.***

1. Define Federalism and explain its role in the American government?
2. How do the principles of checks and balances influence the constitutional process for appointing public officials?
3. Explain how a Bill becomes a law? Which is the branch in charge? Explain the process on how a Bill becomes a law.