Garden Variety Geometry

Student Work: A Selected Example

GARDEN VARIETY GEOMETRY

NAME:_____

DATE:_____

<u>Formulas</u>

(With key words to help you remember when to use them.)

Perimeter of a square or a rectangle **(FENCE)**

P = 2l + 2w where l = length and w = width.

Circumference **(CIRCULAR PATH) (BORDER)**

C = p d or C = p 2r where p = 3.14 or 22/7, and d = diameter
and r = radius. D = 2r.

Area of a rectangle (A square is always a rectangle.) **(GRASS)**

A = L x W where L = length and W = width.

Area of a circle **(GRASS)**

A = p r^2 where p = 3.14 or 22/7 and r = radius. R= d/2.

Volume of a rectangular solid **(CEMENT)**

V = L x W x H where L = length, W = width and H = height.

Volume of a cylinder **(CEMENT)**

V =Pi x R squared x H where Pi = 3.14 or 22/7, R = radius, and H = height

<u>Problems to solve to plan a better backyard</u>

The family dog has always been kept on a chain, but the backyard has become a mess. The family has decided to get rid of the chain and replace the grass in the muddy area. They want to fence in the backyard and build a doghouse on a cement pad. They also want to put in a flagpole surrounded by a flower garden that is bordered by decorative brick. Look at the diagram of the backyard to find the information needed to solve the problems to plan a better backyard.

GARDEN VARIETY GEOMETRY

VOCABULARY REVIEW

NAME:_____

DATE:_____

<u>TERM</u> <u>DEFINITION</u>

Formula	a rule that uses letters in place of numbers
Perimeter	distance around a plane figure or a flat object
Circumference	distance around a circle
Area	amount of surface within the perimeter of a flat figure
Volume	amount of space inside something, a 3-D figure
Rectangle	4 sided figure with 4 right angles, and two pairs of equal sides
Square	4 sided figure with 4 right angles, and 4 equal sides
Rectangular solid	box-shaped figure
Length	longer side, first dimension
Width	shorter side, second dimension
Height	thickness of a figure, third dimension
Circle	a curved figure where all points on the circle are an equal distance from the center
Radius	distance from the center to the circle represented by a line from the center to any position on the curve
Diameter	distance across the circle, represented by a line that goes from one side to the other through the center
Cylinder	can-shaped figure
Pi	Greek word that represents the value of 3.14 or 22/7 Pi stands for the ratio between the circumference and the diameter of a given circle

<u>12 inches = 1 foot 3 feet = 1 yard</u>

FLORIDA ROOM

KEY

☐ = Square Foot
▨ = WINDOWS
▨ = FRENCH DOOR
▨ = CARPETING

A = WEST WALL
B = EAST WALL
C = SOUTH WALL
D = NORTH WALL

LANDSCAPE TIMBERS

30' Land Scape Timbers

KEY
(1) Square 4"

SIDE VIEW

LANDSCAPE TIMBERS

30'

Landscape Timbers

TOP View

KEY
(1) Spure x 4"