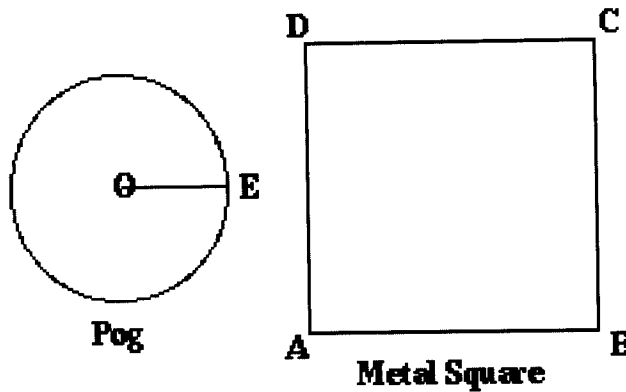


**POGS: LESSON ONE, DEMO**



**Problem Statement**

Pogs are circular metal disks used for recreation.

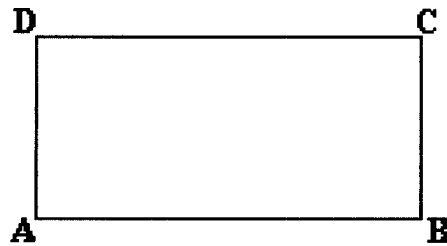
1. The radius of the pog is 2 inches. If a pog is punched out of a square piece of metal measuring 4 inches per side, find the square inches of scrap metal remaining.
2. The radius of the pog is 4 inches. If a pog is punched out of a square piece of metal measuring 8 inches per side, find the amount of scrap metal remaining.
3. The radius of the pog is 6 inches. If a pog is punched out of a square piece of metal measuring 12 inches per side, find the amount of scrap metal remaining.

NOTE: To find the area of the scrap metal remaining, you might have to first find the area of the pog, and the area of the square

pi = 3.1416

	Radius of pog	Length of square's side	Area of scrap Metal	Area of Square ABCD	Area of Pog
Units	inches	inches	sq. inches	sq. inches	sq. inches
Question 1	2	4	3.43	16	12.57
Question 2	4	8	13.73	64	50.27
Question 3	6	12	30.9	144	113.1

**RECTANGLE\_ABCD: SECTION ONE, #1**



**Problem Statement**

Given:

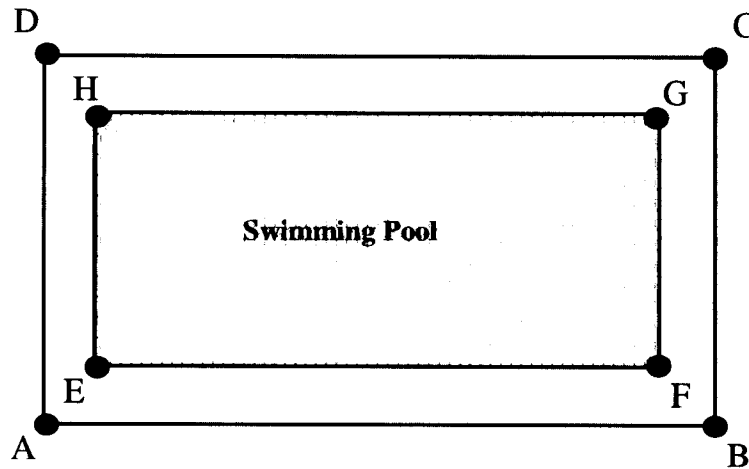
In Rectangle ABCD, segment AB is parallel to segment DC and segments AD and BC are also parallel. In addition, segment AB serves as the base and BC is the altitude (or height).

Using this information, solve for the following questions.

1. If the measure of segment AB (the base) is 60 cm and the measure of segment BC (the height) is 30 cm, find the Area of the Rectangle .
2. If the Area of Rectangle ABCD is 2485 square cm and the measure of segment AB (the base) is 71 cm, find the measure of segment BC (the height).
3. If the Area of Rectangle ABCD is 2701 square cm and the measure of segment BC (the height) is 37 cm, find the measure of segment AB (the base).

	Length of the base (AB)	Height (BC)	Area of Rectangle ABCD
Units	cm	cm	square cm
Question 1	60	30	1800
Question 2	71	35	2485
Question 3	73	37	2701

**BUILDING\_A\_SIDEWALK: SECTION ONE, #2**



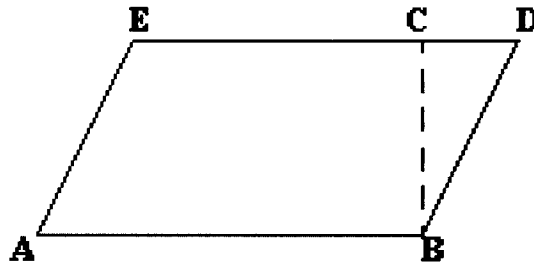
**Problem Statement**

Mr. James is planning to build a sidewalk to surround his pool.  
The sidewalk will replace whatever is left of his entire yard.

1. If the rectangular swimming pool is 26' x 31' and the entire yard is 29' x 35', find the Area of the sidewalk.
2. If the rectangular swimming pool is 28' x 33' and the entire yard is 31' x 37', find the Area of the sidewalk.
3. If the rectangular swimming pool is 31' x 36' and the entire yard is 34' x 40', find the Area of the sidewalk.

	Width of pool	Length of pool	Area of pool	Width of yard	Length of yard	Area of yard	Area of Sidewalk
Units	feet	feet	sq. feet	feet	feet	sq. feet	sq. feet
Question 1	26	31	806	29	35	1015	209
Question 2	28	33	924	31	37	1147	223
Question 3	31	36	1116	34	40	1360	244

**PARALLELOGRAM\_ABDE: SECTION ONE, #3**



**Problem Statement**

Given:

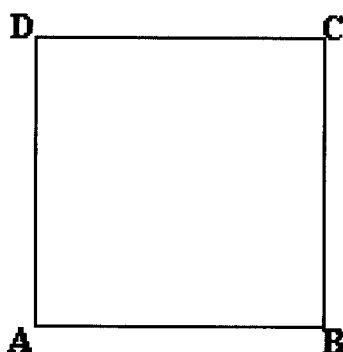
In Parallelogram ABDE, segment AB is parallel to segment ED. AB and ED are the bases of the Parallelogram. Segment BC represents the altitude (or height) of the Parallelogram.

Using this information, solve for the following questions.

1. If the measure of segment AB (the base) is 76 cm and the measure of segment BC (the height) is 38 cm, find the Area of the Parallelogram .
2. If the Area of Parallelogram ABDE is 3741 square cm and the measure of segment AB (the base) is 87 cm, find the measure of segment BC (the height).
3. If the Area of Parallelogram ABDE is 4005 square cm and the measure of segment BC (the height) is 45 cm, find the measure of segment AB (the base).

	Length of base (AB)	Height (BC)	Area of Parallelogram ABDE
Units	cm	cm	square cm
Question 1	76	38	2888
Question 2	87	43	3741
Question 3	89	45	4005

**SQUARE\_ABCD: SECTION ONE, #4**



**Problem Statement**

Given:

In Square ABCD, segment AB is parallel to segment DC and segments AD and BC are also parallel. In addition, segment AB serves as the base and BC is the altitude (or height).

Note:

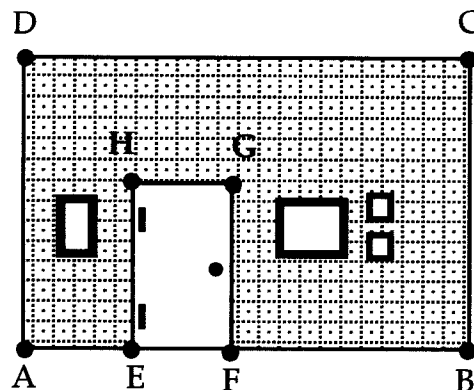
Remember all the sides of a Square are equal in length.

Using this information, solve for the following questions.

1. If the measure of segment AB (the base) is 21 cm and the measure of segment BC (the height) is 21 cm, find the Area of the Square .
2. If the Area of Square ABCD is 676 square cm and the measure of segment AB (the base) is 26 cm, find the measure of segment BC (the height).
3. If the Area of Square ABCD is 784 square cm and the measure of segment BC (the height) is 28 cm, find the measure of segment AB (the base).

Units	Length of the base (AB) cm	Height (BC) cm	Area of Square ABCD square cm
Question 1	21	21	441
Question 2	26	26	676
Question 3	28	28	784

**PAINTING\_THE\_WALL: SECTION ONE, #5**



**Problem Statement**

1. The height of a wall is 22.5' and a 7' x 17.5' rectangular door is positioned on the wall such as there is 10' of wall remaining on the left side and 3' of the wall remaining on the right side.

Find the area of the wall to be painted. Do not paint the door.

2. The height of a wall is 25.0' and a 8' x 20.0' rectangular door is positioned on the wall such as there is 8' of wall remaining on the left side and 4' of the wall remaining on the right side.

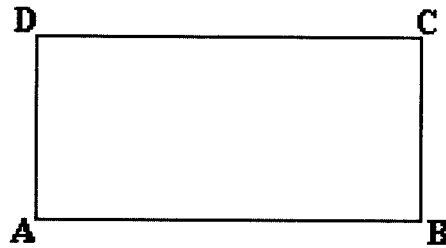
Find the area of the wall to be painted. Do not paint the door.

3. The height of a wall is 25.0' and a 8' x 20.0' rectangular door is positioned on the wall such as there is 10' of wall remaining on the left side and 2.5' of the wall remaining on the right side.

Find the area of the wall to be painted. Do not paint the door.

	Width of Wall (CD)	Height of Wall (AD)	Area of Wall ABCD	Width of Door (HG)	Height of Door (EH)	Area of Door EFGH	Area of shaded region
Units	feet	feet	sq. feet	feet	feet	sq. feet	sq. feet
Question 1	20	22.5	450	7	17.5	122.5	327.5
Question 2	20	25	500	8	20	160	340
Question 3	20.5	25	512.5	8	20	160	352.5

**RECTANGLE\_AREA: SECTION ONE, REMEDIAL**



**Problem Statement**

Given:

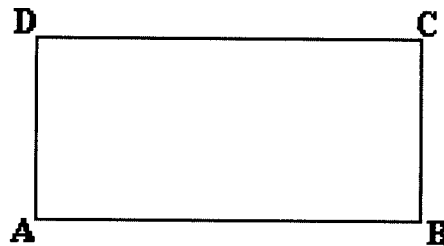
In Rectangle ABCD, segment AB is parallel to segment DC and segments AD and BC are also parallel. In addition, segment AB serves as the base and BC is the altitude (or height).

Using this information, solve for the following questions.

1. If the measure of segment AB (the base) is 70 cm and the measure of segment BC (the height) is 35 cm, find the Area of the Rectangle .

	Length of the base (AB)	Height (BC)	Area of Rectangle ABCD
Units	cm	cm	square cm
Question 1	70	35	2450

### RECTANGLE\_BASE: SECTION ONE, REMEDIAL



#### Problem Statement

Given:

In Rectangle ABCD, segment AB is parallel to segment DC and segments AD and BC are also parallel. In addition, segment AB serves as the base and BC is the altitude (or height).

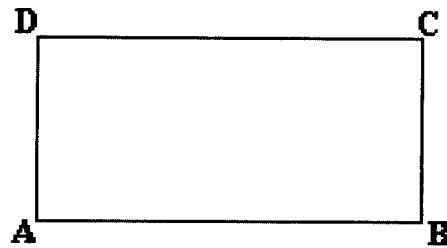
Using this information, solve for the following questions.

1. If the Area of Rectangle ABCD is 2016 square cm and the measure of segment BC (the height) is 32 cm, find the measure of segment AB (the base).

	Length of the base (AB)	Height (BC)	Area of Rectangle ABCD
Units	cm	cm	square cm
Question 1	63	32	2016



**RECTANGLE\_HEIGHT: SECTION ONE, REMEDIAL**



**Problem Statement**

Given:

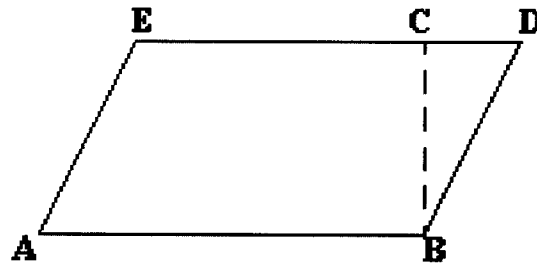
In Rectangle ABCD, segment AB is parallel to segment DC and segments AD and BC are also parallel. In addition, segment AB serves as the base and BC is the altitude (or height).

Using this information, solve for the following questions.

1. If the Area of Rectangle ABCD is 2211 square cm and the measure of segment AB (the base) is 67 cm, find the measure of segment BC (the height).

	Length of the base (AB)	Height (BC)	Area of Rectangle ABCD
Units	cm	cm	square cm
Question 1	67	33	2211

**PARALLELOGRAM\_AREA: SECTION ONE, REMEDIAL**



**Problem Statement**

Given:

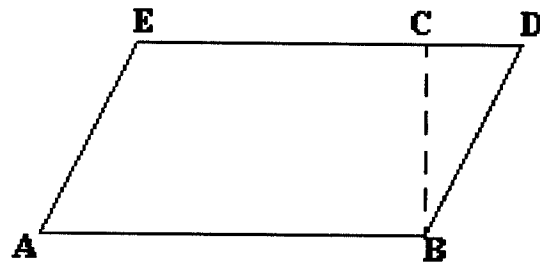
In Parallelogram ABDE, segment AB is parallel to segment ED.  
 AB and ED are the bases of the Parallelogram.  
 Segment BC represents the altitude (or height) of the Parallelogram.

Using this information, solve for the following questions.

1. If the measure of segment AB (the base) is 20 cm and the measure of segment BC (the height) is 10 cm, find the Area of the Parallelogram .

	Length of base (AB)	Height (BC)	Area of Parallelogram ABDE
Units	cm	cm	square cm
Question 1	20	10	200

**PARALLELOGRAM\_BASE: SECTION ONE, REMEDIAL**



**Problem Statement**

Given:

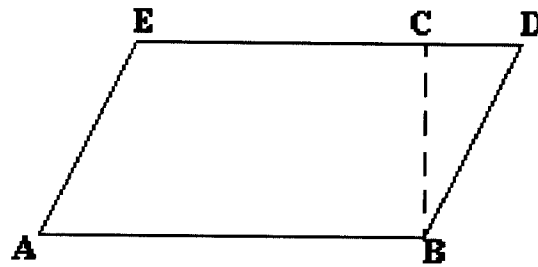
In Parallelogram ABDE, segment AB is parallel to segment ED.  
AB and ED are the bases of the Parallelogram.  
Segment BC represents the altitude (or height) of the Parallelogram.

Using this information, solve for the following questions.

1. If the Area of Parallelogram ABDE is 190 square cm and the measure of segment BC (the height) is 10 cm, find the measure of segment AB (the base).

	Length of base (AB)	Height (BC)	Area of Parallelogram ABDE
Units	cm	cm	square cm
Question 1	19	10	190

**PARALLELOGRAM\_HEIGHT: SECTION ONE, REMEDIAL**



**Problem Statement**

Given:

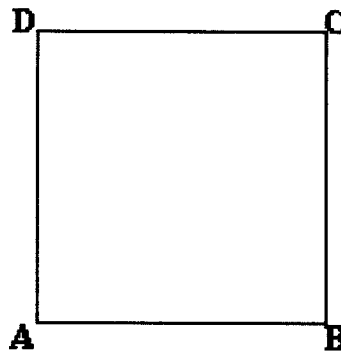
In Parallelogram ABDE, segment AB is parallel to segment ED.  
 AB and ED are the bases of the Parallelogram.  
 Segment BC represents the altitude (or height) of the Parallelogram.

Using this information, solve for the following questions.

1. If the Area of Parallelogram ABDE is 171 square cm and the measure of segment AB (the base) is 19 cm, find the measure of segment BC (the height).

	Length of base (AB)	Height (BC)	Area of Parallelogram ABDE
Units	cm	cm	square cm
Question 1	19	9	171

**SQUARE\_AREA: SECTION ONE, REMEDIAL**



**Problem Statement**

Given:

In Square ABCD, segment AB is parallel to segment DC and segments AD and BC are also parallel. In addition, segment AB serves as the base and BC is the altitude (or height).

Note:

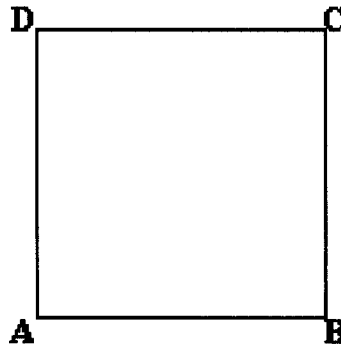
Remember all the sides of a Square are equal in length.

Using this information, solve for the following questions.

1. If the measure of segment AB (the base) is 22 cm and the measure of segment BC (the height) is 22 cm, find the Area of the Square .

	Length of the base (AB)	Height (BC)	Area of Square ABCD
Units	cm	cm	square cm
Question 1	22	22	484

**SQUARE\_BASE: SECTION ONE, REMEDIAL**



**Problem Statement**

Given:

In Square ABCD, segment AB is parallel to segment DC and segments AD and BC are also parallel. In addition, segment AB serves as the base and BC is the altitude (or height).

Note:

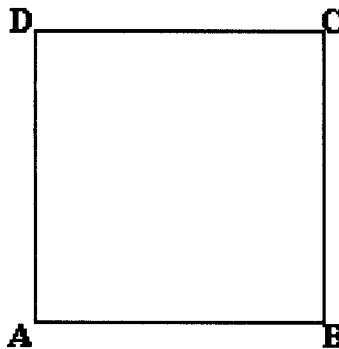
Remember all the sides of a Square are equal in length.

Using this information, solve for the following questions.

1. If the Area of Square ABCD is 196 square cm and the measure of segment BC (the height) is 14 cm, find the measure of segment AB (the base).

	Length of the base (AB)	Height (BC)	Area of Square ABCD
Units	cm	cm	square cm
Question 1	14	14	196

### SQUARE\_HEIGHT: SECTION ONE, REMEDIAL



#### Problem Statement

Given:

In Square ABCD, segment AB is parallel to segment DC and segments AD and BC are also parallel. In addition, segment AB serves as the base and BC is the altitude (or height).

Note:

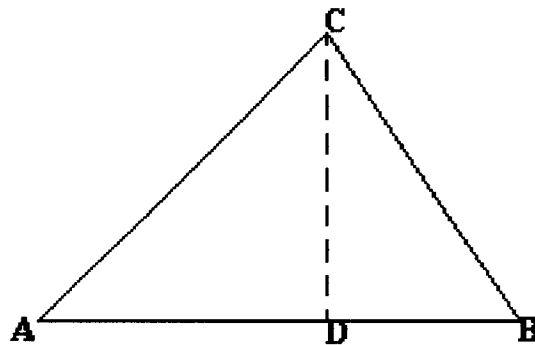
Remember all the sides of a Square are equal in length.

Using this information, solve for the following questions.

1. If the Area of Square ABCD is 100 square cm and the measure of segment AB (the base) is 10 cm, find the measure of segment BC (the height).

	Length of the base (AB)	Height (BC)	Area of Square ABCD
Units	cm	cm	square cm
Question 1	10	10	100

**TRIANGLE\_ABC: SECTION TWO, #1**



**Problem Statement**

Given:

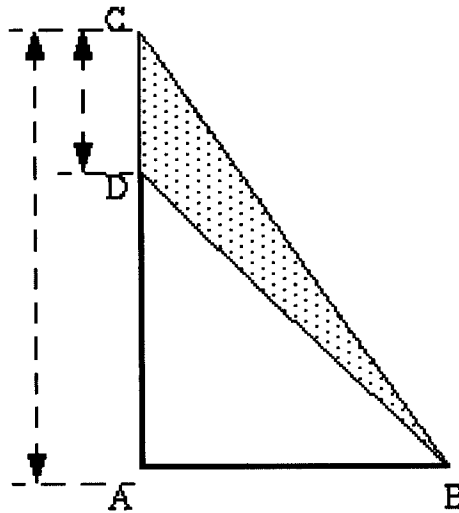
In Triangle ABC, segment AB is the base, and segment CD is the altitude (or height).

1. If the measure of segment AB (the base) is 43 cm and the measure of segment CD (the height) is 33 cm, find the area of the Triangle?
2. If the area of Triangle ABC is 2146 square cm and the measure of segment AB (the base) is 58 cm, find the measure of segment CD (the height)?
3. If the area of Triangle ABC is 1880 square cm and the measure of segment CD (the height) is 40 cm, find the measure of segment AB (the base)?

	Length of base (AB)	Height (CD)	Area of Triangle ABC
Units	cm	cm	square cm
Question 1	43	33	709.5
Question 2	58	74	2146
Question 3	94	40	1880



TRIANGLE\_TRIANGLE: SECTION TWO, #2

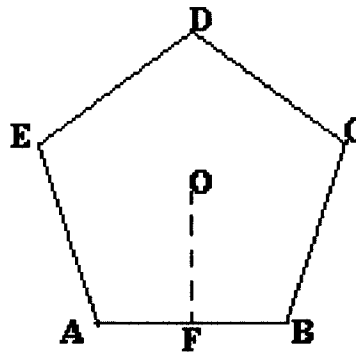


**Problem Statement**

Triangle ABC and triangle ABD each sharing a right angle located at vertex A, and a base (AB). If  $AB = 49$  cm,  $CD = 24$  cm and  $AC = 73$  cm, find the area of the shaded region. Note: CDB is a triangle.

	The base of triangle CDB	The height of triangle CDB	Area of shaded triangle CDB
Units	cm	cm	square cm
Question 1	24	49	588

**PENTAGON: SECTION TWO, #3**



**Problem Statement**

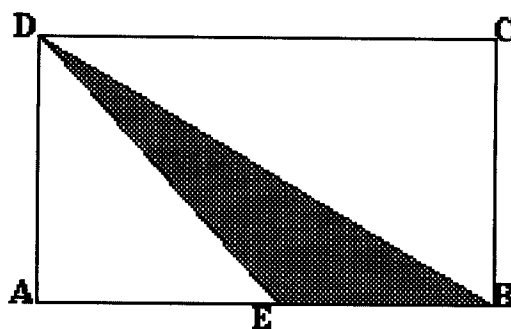
Polygon ABCDE is a regular pentagon.

1. If the measure of segment AB is 43 cm, and the measure of the apothem ( OF ) is 23 cm, find the area of the pentagon.
2. If the area of the pentagon ABCDE is 600.0 square cm, and the measure of segment AB (a side) is 24 cm, find the measure of segment OF (the apothem).
3. If the area of the pentagon ABCDE is 4160.0 square cm, and the measure of segment OF (the apothem) is 32 cm, find the measure of segment AB (a side).

Note: all FIVE sides of a regular pentagon are equal.

Units	Length of side (AB) cm	Length of Apothem (OF) cm	Area of Pentagon ABCDE square cm
Question 1	43	23	2472.5
Question 2	24	10	600
Question 3	52	32	4160

**TRIANGLE\_RECTANGLE: SECTION TWO, #4**

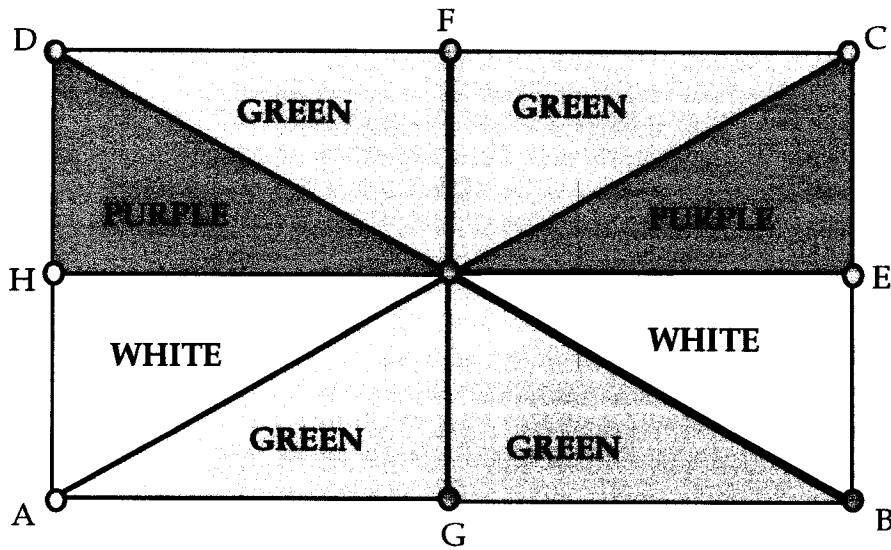


**Problem Statement**

In Rectangle ABCD, if  $AB = 35$ ,  $AD = 23$  and E is the midpoint of segment AB, find the Area of the (shaded) triangle EBD.

	The base of triangle EBD	The height of triangle EBD	Area of triangle EBD
Units	cm	cm	square cm
Question 1	17.5	23	201.25

DESIGNING\_A\_QUILT: SECTION TWO, #5



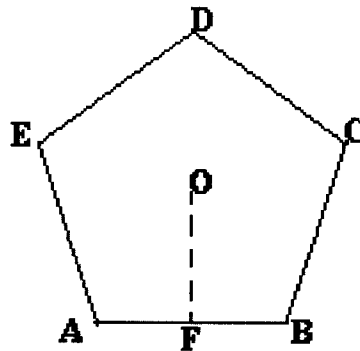
**Problem Statement**

This rectangular sketch is representative of one quilt patch. You will need a total 8 patches to complete the quilt. Find the amount of each color of fabric needed to make the quilt. Note that there are four green triangles, two white triangles and two purple triangles in each patch.

1. If  $DF = FC = 9$  inches and  $DH = HA = 4$  inches.
2. If  $DF = FC = 2$  inches and  $DH = HA = 2$  inches.
3. If  $DF = FC = 27$  inches and  $DH = HA = 12$  inches.

	Width of Triangle	Height of Triangle	Area of Triangle	Total Area of White	Total Area of Green	Total Area of Purple
Units	inches	inches	sq. inches	sq. inches	sq. inches	sq. inches
Question 1	9	4	18	36	72	36
Question 2	2	2	2	4	8	4
Question 3	27	12	162	324	648	324

**PENTAGON\_ABCDE: SECTION TWO, #6**



**Problem Statement**

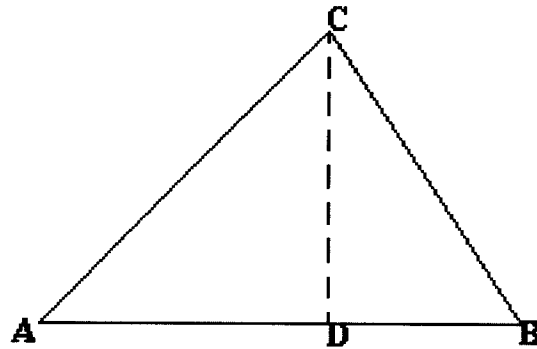
Polygon ABCDE is a regular pentagon.

1. If the measure of segment AB is 65 cm, and the measure of the apothem ( OF ) is 37 cm, find the area of the pentagon.
2. If the area of the pentagon ABCDE is 900.0 square cm, and the measure of segment AB (a side) is 24 cm, find the measure of segment OF (the apothem).
3. If the area of the pentagon ABCDE is 4125.0 square cm, and the measure of segment OF (the apothem) is 33 cm, find the measure of segment AB (a side).

Note: all FIVE sides of a regular pentagon are equal.

Units	Length of side (AB) cm	Length of Apothem (OF) cm	Area of Pentagon ABCDE square cm
Question 1	65	37	6012.5
Question 2	24	15	900
Question 3	50	33	4125

## TRIANGLE\_AREA: SECTION TWO, REMEDIAL



### Problem Statement

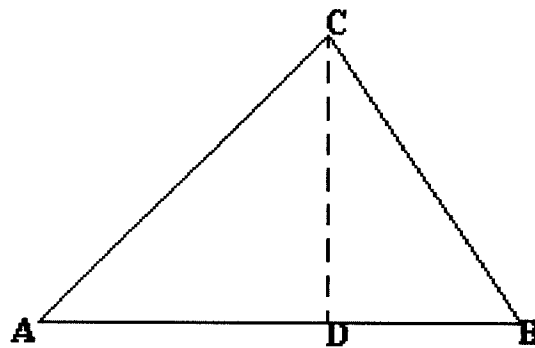
Given:

In Triangle ABC, segment AB is the base, and segment CD is the altitude (or height).

1. If the measure of segment AB (the base) is 72 cm and the measure of segment CD (the height) is 21 cm, find the area of the Triangle?

	Length of base (AB)	Height (CD)	Area of Triangle ABC
Units	cm	cm	square cm
Question 1	72	21	756

**TRIANGLE\_BASE: SECTION TWO, REMEDIAL**



**Problem Statement**

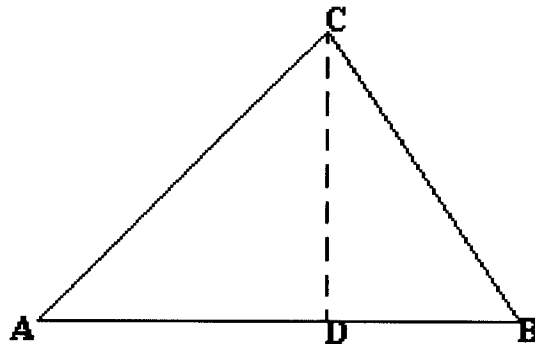
Given:

In Triangle ABC, segment AB is the base, and segment CD is the altitude (or height).

1. If the area of Triangle ABC is 800 square cm and the measure of segment CD (the height) is 20 cm, find the measure of segment AB (the base)?

	Length of base (AB)	Height (CD)	Area of Triangle ABC
Units	cm	cm	square cm
Question 1	80	20	800

### TRIANGLE\_HEIGHT: SECTION TWO, REMEDIAL



#### Problem Statement

Given:

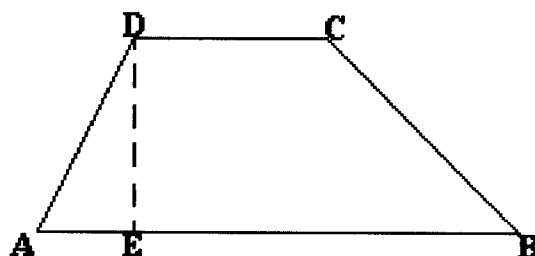
In Triangle ABC, segment AB is the base, and segment CD is the altitude (or height).

1. If the area of Triangle ABC is 1596 square cm and the measure of segment AB (the base) is 57 cm, find the measure of segment CD (the height)?

	Length of base (AB)	Height (CD)	Area of Triangle ABC
Units	cm	cm	square cm
Question 1	57	56	1596



**TRAPEZOID\_ABCD: SECTION THREE, #1**



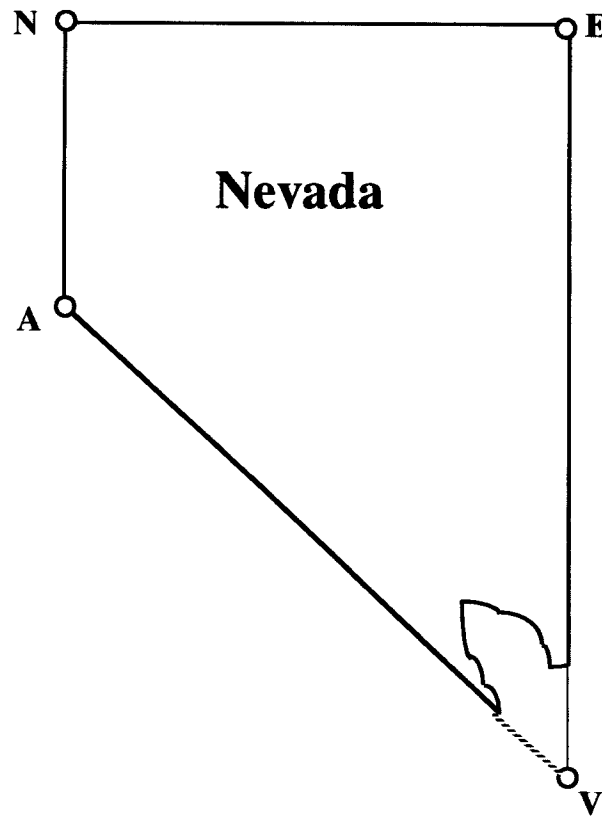
**Problem Statement**

In Trapezoid ABCD, segments AB and CD are the bases, and DE is the altitude (or height).

1. If the measure of segment DE is 6 cm, the measure of segment AB is 17 cm and the measure of segment CD is 15 cm find the area of the Trapezoid.
2. If the area of Trapezoid ABCD is 423.0 square cm, the measure of segment DE is 9 cm, and the measure of segment CD is 46 cm find the measure of segment AB (the other base).
3. If the area of Trapezoid ABCD is 357.5 square cm, the measure of segment AB is 34 cm and the measure of segment CD is 31 cm find the measure of segment DE (the height).

	Length of the longer base (AB)	Length of the shorter base (CD)	Height (DE)	Area of Trapezoid ABCD
Units	cm	cm	cm	square cm
Question 1	17	15	6	96
Question 2	48	46	9	423
Question 3	34	31	11	357.5

**NEVADA\_AREA: SECTION THREE, #2**



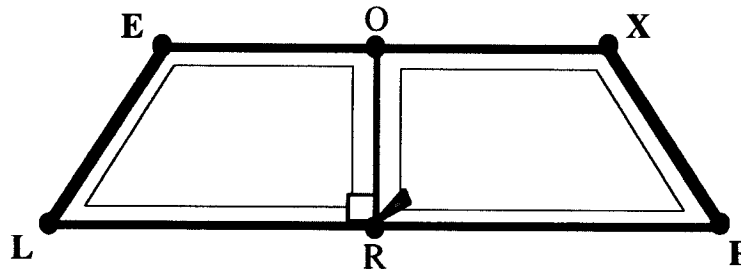
**Problem Statement**

The state of Nevada resembles, for the most part a trapezoid.

Given the following diagram and measurements:  $AV = 438$  miles,  $NA = 208$  miles,  $EV = 505$  miles, &  $NE = 305$  miles, find the approximate area of the state of Nevada.

	AV	NA	EV	NE	Area of NEVA
Units	miles	miles	miles	miles	sq. miles
Question 1	438	208	505	305	107970

**REARWINDOW: SECTION THREE, #3**

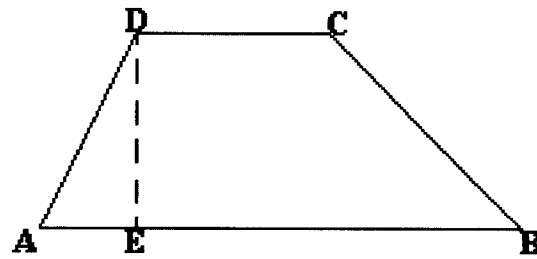


**Problem Statement**

The glass on the back window of my Explorer is a trapezoid. Use the following measurements to help you find the amount of glass used to make the window: EX = 42 inches, LP = 52 inches, and OR = 21 inches.

Units	EX inches	LP inches	OR inches	Area of EXPL sq. inches
Question 1	42	52	21	987

**TRAPEZOID\_ALTITUDE: SECTION THREE, #4**



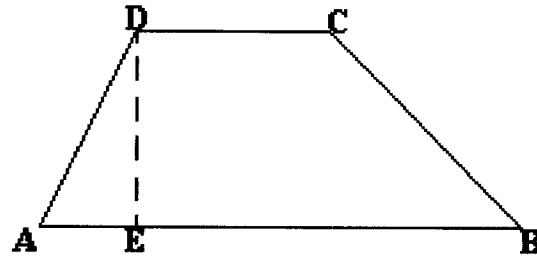
**Problem Statement**

The bases of a trapezoid have lengths 22 ft. and 32 ft. and the trapezoid has area of 513.0 sq. ft.

What is the length of the altitude of the trapezoid?

	Length of the longer base (AB)	Length of the shorter base (CD)	Height (DE)	Area of Trapezoid ABCD
Units	cm	cm	cm	square cm
Question 1	32	22	19	513

**TRAPEZOID\_AREA: SECTION THREE, REMEDIAL**



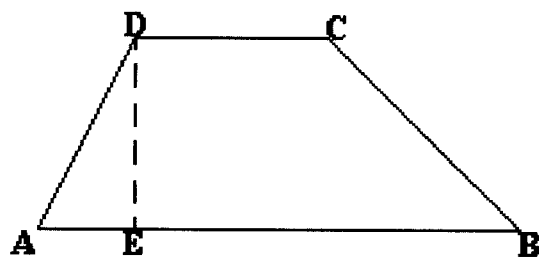
**Problem Statement**

In Trapezoid ABCD, segments AB and CD are the bases, and DE is the altitude (or height).

1. If the measure of segment DE is 7 cm, the measure of segment AB is 33 cm and the measure of segment CD is 31 cm find the area of the Trapezoid.

	Length of the longer base (AB)	Length of the shorter base (CD)	Height (DE)	Area of Trapezoid ABCD
Units	cm	cm	cm	square cm
Question 1	33	31	7	224

**TRAPEZOID\_BASE: SECTION THREE, REMEDIAL**



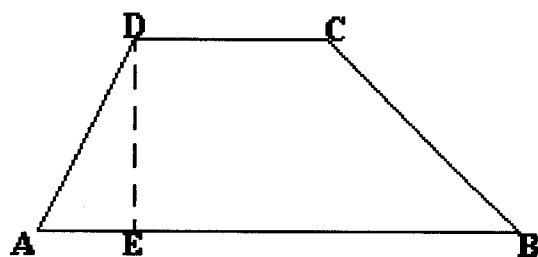
**Problem Statement**

In Trapezoid ABCD, segments AB and CD are the bases, and DE is the altitude (or height).

1. If the area of Trapezoid ABCD is 1425.0 square cm, the measure of segment DE is 25 cm, and the measure of segment CD is 56 cm find the measure of segment AB (the other base).

	Length of the longer base (AB)	Length of the shorter base (CD)	Height (DE)	Area of Trapezoid ABCD
Units	cm	cm	cm	square cm
Question 1	17	15	6	96

**TRAPEZOID\_HEIGHT: SECTION THREE, REMEDIAL**



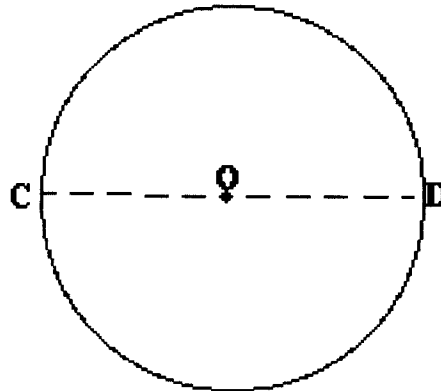
**Problem Statement**

In Trapezoid ABCD, segments AB and CD are the bases, and DE is the altitude (or height).

1. If the area of Trapezoid ABCD is 472.0 square cm, the measure of segment AB is 31 cm and the measure of segment CD is 28 cm find the measure of segment DE (the height).

	Length of the longer base (AB)	Length of the shorter base (CD)	Height (DE)	Area of Trapezoid ABCD
Units	cm	cm	cm	square cm
Question 1	31	28	16	472

**CIRCLE\_O: SECTION FOUR, #1**



**Problem Statement**

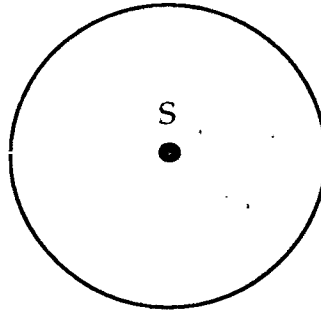
1. In Circle O, diameter CD has a measure of 28 cm, find the radius, the area and the circumference of the circle.
2. In Circle O, radius OD has a measure of 28 cm, find the diameter, the area and the circumference of the circle.
3. If the area of circle O is  $1764 * \pi$  square cm, find the radius, the diameter and the circumference of the circle.
4. If the circumference of Circle C is  $112 * \pi$  cm, find the diameter, the radius and the area of the circle.

$\pi = 3.1416$

	Diameter (CD)	Radius (OD)	Area of Circle O	Circumference of Circle O
Units	cm	cm	sq. cm	cm
Question 1	28	14	615.75	87.96
Question 2	56	28	2463.01	175.93
Question 3	84	42	5541.77	263.89
Question 4	112	56	9852.06	351.86



**LAWN\_SPRINKLER: SECTION FOUR, #2**

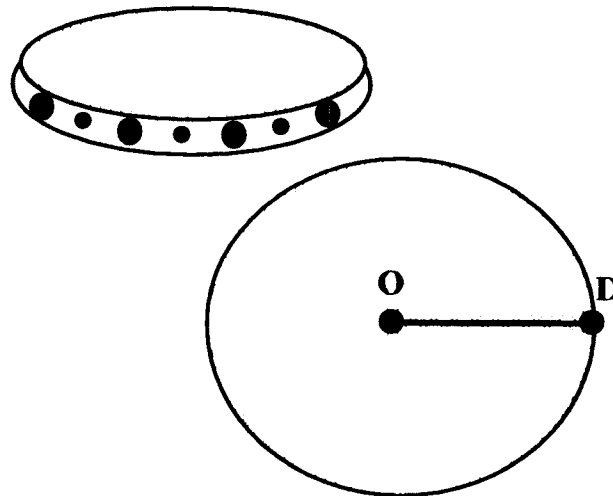


**Problem Statement**

If a lawn sprinkler spins 360 degrees and has a 17 ft spray, find the area of lawn that will be watered if the sprinkler is not moved.

	Length of Spray (OD) - Radius	Watered Lawn - Circle
Units	feet	sq. feet
Question 1	17	907.92

COVERING\_POOL: SECTION FOUR, #3



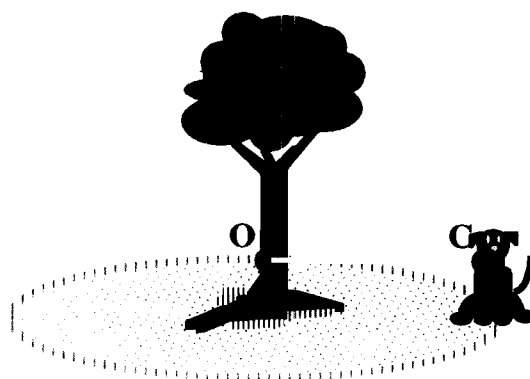
**Problem Statement**

The Jeffersons' circular baby pool does not have a cover to keep the water clean when it is not in use. The Area of the pool is  $196 \cdot \pi$  square feet. To make a cover for the pool we will need to know the diameter. Calculate the diameter of the baby pool.

$\pi = 3.1416$

	Area of pool surface	Radius of pool surface	Diameter of pool surface
Units	square feet	feet	feet
Question 1	615.75	14	28

**DOG\_TIED\_TO\_TREE: SECTION FOUR, #4**



**Problem Statement**

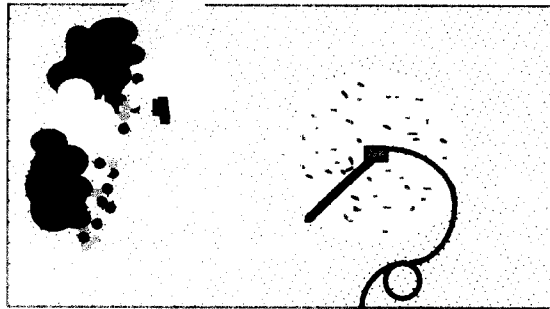
Cocoa is tied to a tree in the center of her backyard. The rope is 43 feet long. However, Cocoa keeps wandering around her tree, consequently winding her rope tighter and tighter around the tree. Eventually, Cocoa is wound so close to the tree that she cannot walk around. Cocoa's owner, Chris, wants to build a fence so that he could do away with the rope altogether.

Help Chris figure out the area to be fenced in that would give Cocoa the same space to roam around in that the rope originally gave her.

Once the area is determined, Chris needs to know how much chain-link fencing to buy. What is the length of fencing that he will need?

	Length of the rope (Radius)	Area dog has to roam (Area)	Length of fencing (Circumference)
Units	square feet	feet	feet
Question 1	615.75	14	28

LAWN\_SPRINKLER\_2: SECTION FOUR, #5

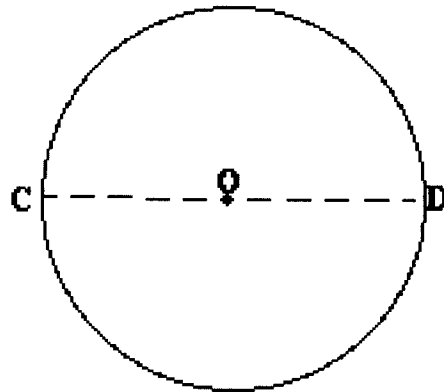


**Problem Statement**

A lawn sprinkler spins 360 degrees and has a 1 ft spray. If the rectangular lawn is 5 feet by 9 feet, find the area of lawn that will not be watered if the sprinkler is not moved.

	Length of Spray (OD) - (Radius)	Watered Lawn (Circle)	Area of Total Lawn (Rectangle)	Area of Unwatered Lawn
Units	cm	cm	sq. cm	cm
Question 1	1	3.1416	45	41.86

**CIRCLE\_AREA: SECTION FOUR, REMEDIAL**



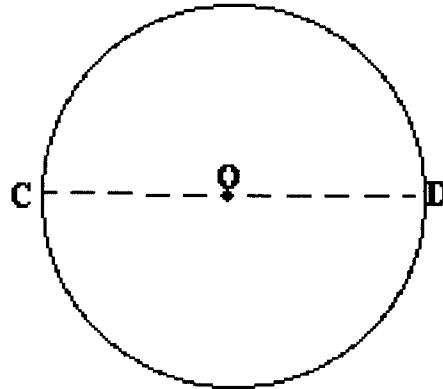
**Problem Statement**

1. If the area of circle O is  $13689 \cdot \pi$  square cm, find the radius, the diameter and the circumference of the circle.

$\pi = 3.1416$

	Diameter (CD)	Radius (OD)	Area of Circle O	Circumference of Circle O
Units	cm	cm	sq. cm	cm
Question 1	234	117	4363.68	735.13

**CIRCLE\_CIRCUMFERENCE: SECTION FOUR, REMEDIAL**



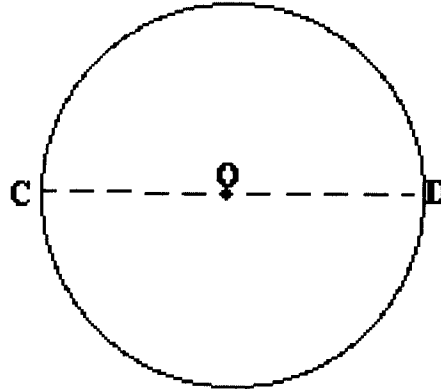
**Problem Statement**

1. If the circumference of Circle C is  $80 \cdot \pi$  cm, find the diameter, the radius and the area of the circle.

$\pi = 3.1416$

	Diameter (CD)	Radius (OD)	Area of Circle O	Circumference of Circle O
Units	cm	cm	sq. cm	cm
Question 1	80	40	5026.56	251.33

**CIRCLE\_DIAMETER: SECTION FOUR, REMEDIAL**



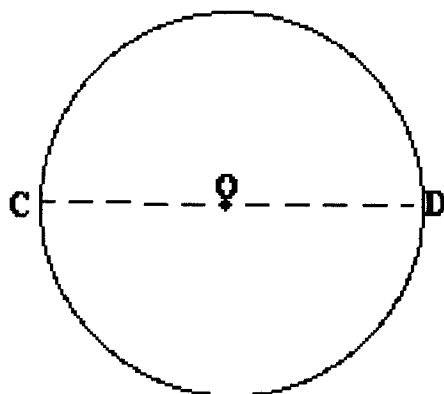
**Problem Statement**

1. In Circle O, diameter CD has a measure of 44 cm, find the radius, the area and the circumference of the circle.

pi = 3.1416

	Diameter (CD)	Radius (OD)	Area of Circle O	Circumference of Circle O
Units	cm	cm	sq. cm	cm
Question 1	44	22	1520.53	138.23

**CIRCLE\_RADIUS: SECTION FOUR, REMEDIAL**



**Problem Statement**

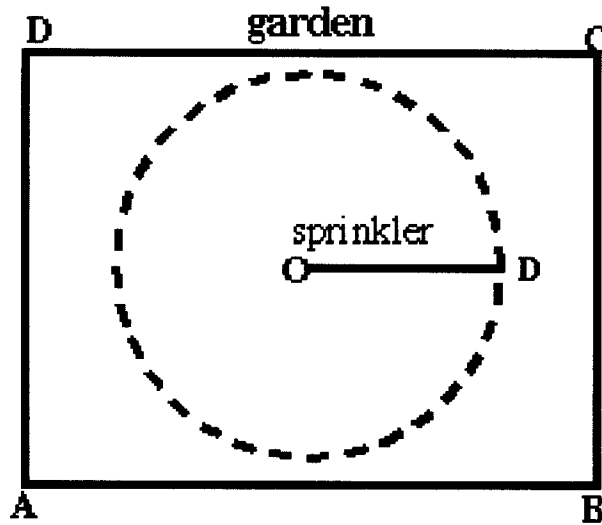
1. In Circle O, radius OD has a measure of 44 cm, find the diameter, the area and the circumference of the circle.

$\pi = 3.1416$

	Diameter (CD)	Radius (OD)	Area of Circle O	Circumference of Circle O
Units	cm	cm	sq. cm	cm
Question 1	88	44	6082.12	276.46



**WATERING\_VEGGIES: SECTION FIVE, #1**

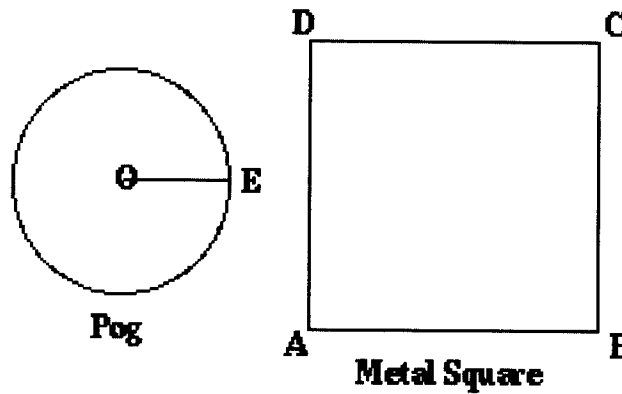


**Problem Statement**

A lawn sprinkler spins 360 degrees and has a 14 ft spray. If a square garden has sides that measure 29.5 feet, does the sprinkler have to be moved to water the entire garden? Find the area of garden that will not be watered if the sprinkler is not moved.

	Length of spray (OD) feet	Area of watered garden sq. feet	Area of total garden sq. feet	Area of unwatered garden sq. feet
Units	feet	sq. feet	sq. feet	sq. feet
Question 1	14	615.75	870.25	254.5

**POGS: SECTION FIVE, #2**



**Problem Statement**

Pogs are circular metal disks used for recreation.

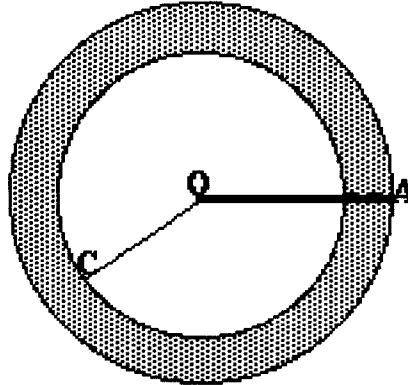
1. The radius of the pog is 2 inches. If a pog is punched out of a square piece of metal measuring 4 inches per side, find the square inches of scrap metal remaining.
2. The radius of the pog is 4 inches. If a pog is punched out of a square piece of metal measuring 8 inches per side, find the amount of scrap metal remaining.
3. The radius of the pog is 6 inches. If a pog is punched out of a square piece of metal measuring 12 inches per side, find the amount of scrap metal remaining.

NOTE: To find the area of the scrap metal remaining, you might have to first find the area of the pog, and the area of the square

$\pi = 3.1416$

	Radius of pog inches	Length of square's side inches	Area of scrap Metal sq. inches	Area of Square ABCD sq. inches	Area of Pog sq. inches
Question 1	2	4	3.43	16	12.57
Question 2	4	8	13.73	64	50.27
Question 3	6	12	30.9	144	113.1

**ONE-CIRCLE-IN-CIRCLE: SECTION FIVE, #3**



**Problem Statement**

In the figure, the shaded area is  $60.75\pi$  square inches. If  $OC = 4.5$  inches, find  $OA$ .

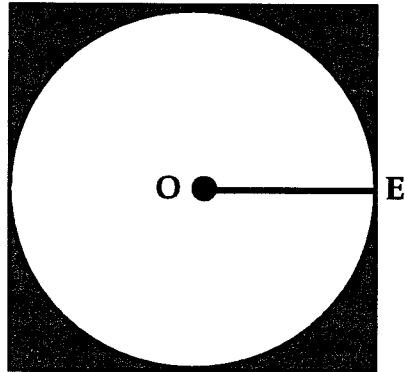
$\pi = 3.1416$ .

	Radius of small circle (OC)	Radius of large circle (OA)	Area of shaded region	Area of small circle	Area of large circle
Units	inches	inches	sq. inches	sq. inches	sq. inches
Question 1	4.5	6.36	190.85	63.62	127.23

8.99

254.47

**ONE-CIRCLE-IN-SQUARE: SECTION FIVE, #4**

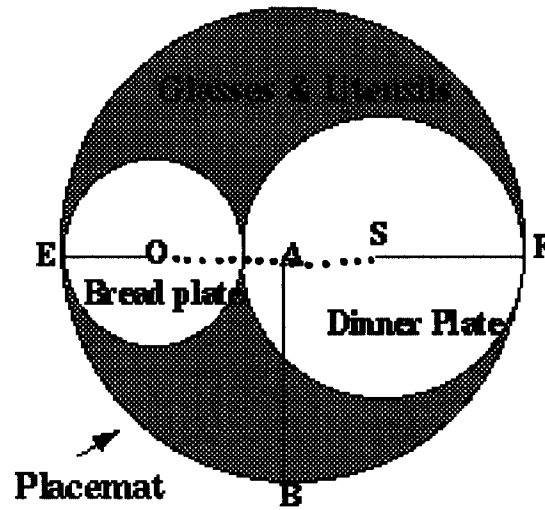


**Problem Statement**

Circle O has a radius OE of 5.0 feet. It is enclosed in Square ABCD, Square ABCD, like all squares, have four sides of equal length. In this diagram, the length of AB = 10 feet. Use this information to find the area of the shaded region.

	Length of radius (OE)	Length of Square's side (AB)	Area of shaded region	Area of circle	Area of square
Units	inches	inches	sq. inches	sq. inches	sq. inches
Question 1	5	10	21.46	78.54	100

**TWO-CIRCLES-IN-A-CIRCLE: SECTION FIVE, #5**



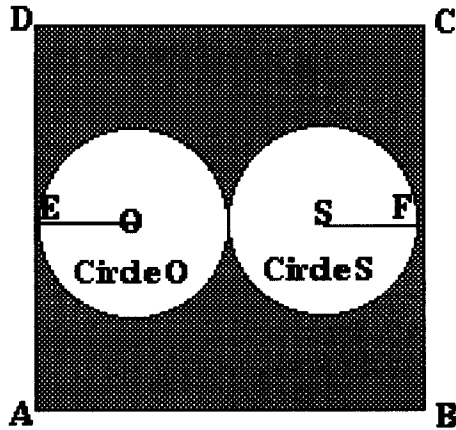
**Problem Statement**

Aaron is preparing to host a big dinner party for the newly elected Mayor. He wants everything to be just right. He is expecting twelve guests. Setting his table, he puts the dinner plate to the right, and the bread plate to the left. Because his table is so small, he knows he needs circular placemats that do not extend beyond the combined diameters of the dinner and bread plate if he is going to fit everyone.

Given that the radius of the dinner plate is 6.6 inches, and the bread plate is 3.3 inches, find the size (area) of placemat that Aaron will need to purchase, and then the area of remaining space he will have for glasses and utensils.

	Radius (OE) of bread plate inches	Radius (SF) of dinner plate inches	Radius (AB) of placemat inches	Area of placemat sq. inches	Area for glasses and utensils sq. inches	Area of bread plate sq. inches	Area of dinner plate sq. inches
Units							
Question 1	3.3	6.6	9.9	307.91	136.85	34.21	136.85

**TWO-CIRCLES-IN-A-SQUARE: SECTION FIVE, #6**



**Problem Statement**

In the diagram, two identical circles, O and S, are enclosed in Square ABCD. Circle O has a radius (OE) of 1.0 feet. Circle S has a radius (SF) of identical length to Circle O.

Using this information, find the area of the shaded region.

	Length of radius (OE)	Length (AB) of square's side	Area of shaded region	Area of square ABCD	Area of unshaded region
Units	inches	inches	sq. inches	sq. inches	sq. inches
Question 1	1	4	9.72	16	6.28