

FINAL EXAM REVIEW – MULTIPLE CHOICE

Unit 1

Unit 2

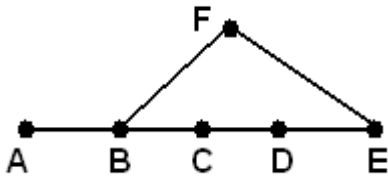
3.) How many people must be in a room to guarantee that at least 5 of them were born in the same month?

4.) If there are 8 math teachers at CHS and each teacher teaches 6 classes, how many students must take a math class to guarantee at least one class has at least 25 students?

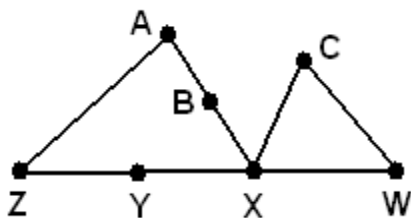
5.) What is the next term in the sequence listed below following inductive reasoning?
-3, 7, 12, 14, 15, 17, 22, ??

6.) What is the next term in the sequence listed below following inductive reasoning?
-10, 2, 22, 47, 74, 100

7.) What is the probability a randomly chosen segment in the figure below contains point C?



8.) What is the probability a randomly chosen segment in the figure below contains point X?



1.) What is the converse of "If you like LeBron James, you like the Cleveland Cavaliers"?

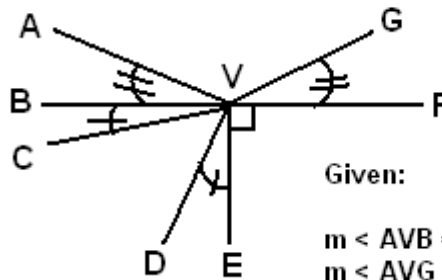
2.) What is the converse of "If you like the book Fahrenheit 451, then you like English class"?

3.) Draw an Euler Diagram representing "All school days are fun."

4.) Draw an Euler Diagram representing "If you are rich, then you eat pasta."

5.) What is the converse of the statement "If it is summer, then it is hot."

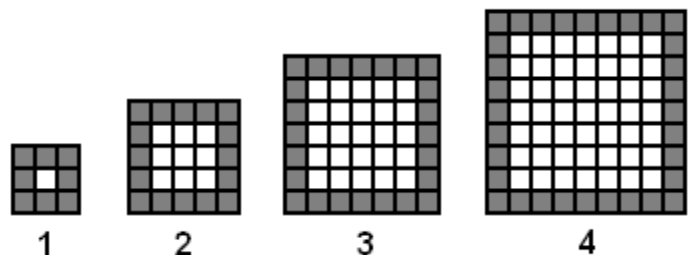
9.) Solve for x and y. [Unit 1 cont.]



Given:

$$\begin{aligned} m \angle AVB &= 8x + 2y - 9 \\ m \angle AVG &= 12x + 16y + 2 \\ m \angle CVD &= 3x + 15y + 8 \\ m \angle DVE &= 7x - 7y + 1 \end{aligned}$$

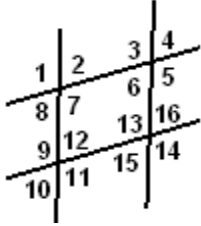
10.) How many shaded unit squares would there be in the 100th figure?



Unit 3

2.) Identify a pair of alternate interior angles in the given figure.

3.) Identify a pair of corresponding angles in the given figure.

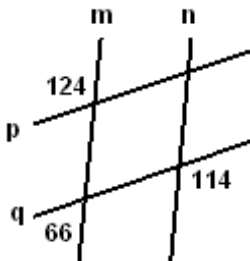


4.) What is the sum of the measures of the exterior angles in a 502-gon?

5.) What is the sum of the measures of the interior angles of a 2357-gon?

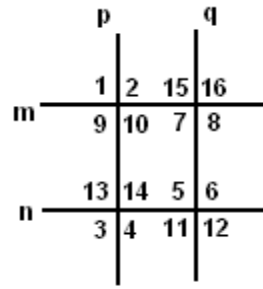
6.) What is the measure of each interior angle in a regular 150-gon?

7.) Which lines in the figure (if any) are parallel?



8.) What does the transformation $T(x,y) = (x + 2, y - 4)$ do to a figure in the plane?

9.)

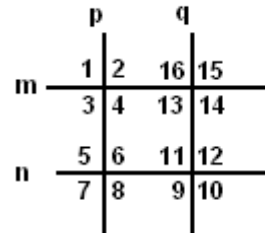


Given:

$$\begin{aligned} m < 4 &= 8x + 7y - 2 \\ m < 5 &= 17x - 4y + 30 \\ m < 7 &= 2x + 11y + 5 \\ m < 10 &= 14y - 3x + 5 \\ m < 14 &= 4x + 5y + 38 \\ m < 16 &= x + 12y + 3 \end{aligned}$$

Find ... $x = ?$ $y = ?$ Which lines are parallel?

10.)



Given:

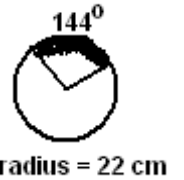
$$\begin{aligned} p &\parallel q \\ m < 3 &= 24x + 6y + 13 \\ m < 5 &= 30x - 4y - 20 \\ m < 11 &= 9x - 19y + 31 \\ m < 16 &= 22x - 8y + 3 \end{aligned}$$

Find... $x = ?$ and $y = ?$

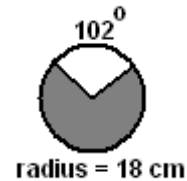
Unit 6

1.) Is the triangle with side lengths 14, 22, 17 acute, right, or obtuse?

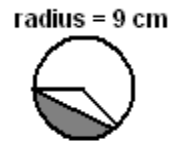
2.) Find the length of the arc:



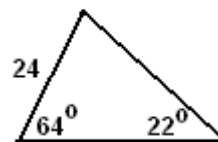
3.) Find the area:



4.) Find the area of the sector on the right.
EXACT



5.) Find the area of the triangle.



[**Unit 6 Continued**]

- 7.) What is the area of a regular 11-gon with a side length of 20 cm?

- 8.) Find the probability a randomly thrown dart lands in the shaded region. (square and circles)



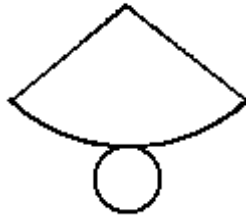
Area of Square = 100

- 9.) A window has width 80 cm (rectangle and semicircle). How tall is the window if its area is 16,000 square centimeters? (nearest cm)



- 10.) A dog is tied to the corner of a shed in the shape of a regular 9-sided polygon. The shed has side lengths of 20 feet, and the dog is on a 35 foot leash. How much area does the dog have?

- 11.) A triangle has sides of length 19, 15, 12. Classify it as acute, right, or obtuse.

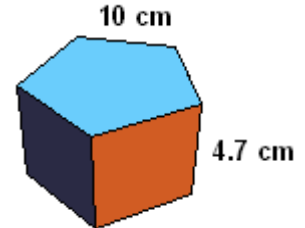


Unit 7

- 2.) Find the volume and surface area of a sphere of diameter 12 cm.

- 3.) What type of figure is formed by this net? (on the left)

- 7.) Find the surface area of the prism (regular polygons and rectangles.)



- 4.) Find the volume of the prism (regular polygons and rectangles.)

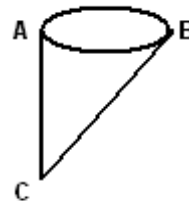


- 5.) Find the surface area of the right cone.



horizontal length = 20 cm
diameter = 8 cm

- 6.) Find the volume of the cone.



Given:

$BC = 20 \text{ cm}$

$m \angle BAC = 90$

$m \angle ACB = 40$

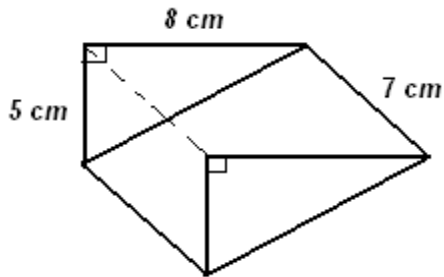
[**Unit 7 continued**]

Unit 8 - Recent... not included

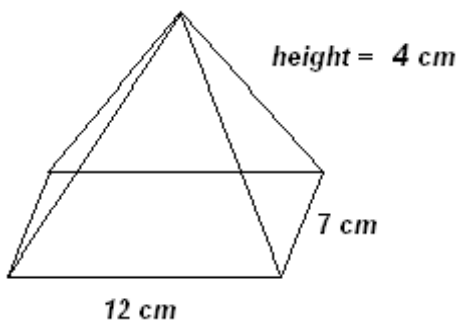
- 8.) A meatball has a diameter of 3 cm.
If ground meat is 0.95 grams per
cubic centimeter and
1 pound is 453.59 grams,
how many meatballs could you make
with 1.75 pounds of meat?
Round *appropriately*.

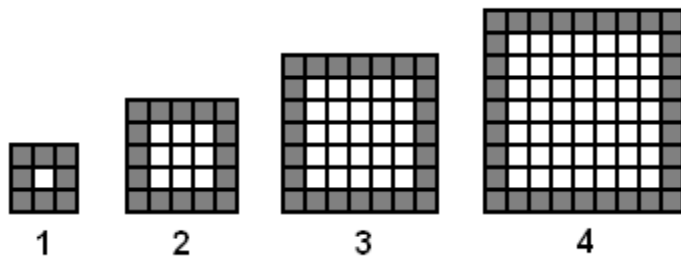
Unit 5 – Used for Units 6 and 7

- 9.) Find the surface area
(right triangles and rectangles)



- 10.) Find the surface area
of the right pyramid.



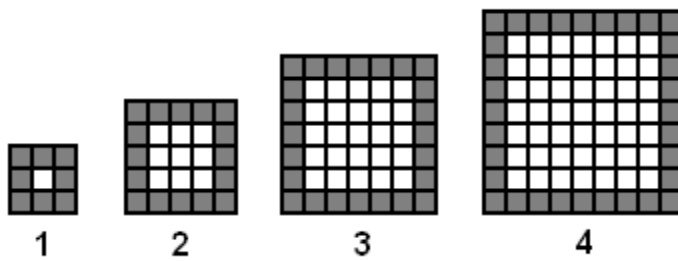


	p		q	
m	1	2	15	16
	9	10	7	8
n	13	14	5	6
	3	4	11	12

Given:

$$\begin{aligned}
 m < 4 &= 8x + 7y - 2 \\
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 \end{aligned}$$

Find ... $x = ?$ $y = ?$ Which lines are parallel?

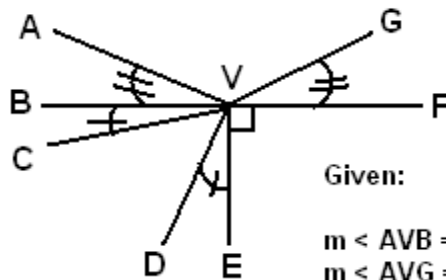


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Given:

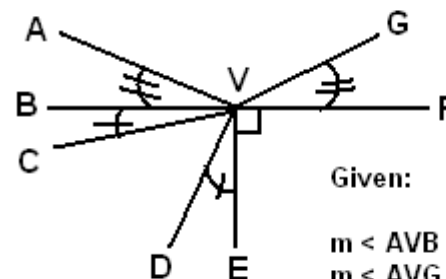
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	p		q	
m	1	2	16	15
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	7	8	9	10

Given:

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	p		q	
m	1	2	16	15
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n	5	6	11	12
	7	8	9	10

Given:

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