# Geometry Jeopardy

Math4020

## *Categories*

| Polygons | Angles |
|---|---|
| 10 points | 10 points |
| 20 points | 20 points |
| 30 points | 30 points |
| 40 points | 40 points |
| 50 points | 50 points |

| Area/Perimeter | Hodge Podge |
|---|---|
| 10 points | 10 points |
| 20 points | 20 points |
| 30 points | 30 points |
| 40 points | 40 points |
| 50 points | 50 points |

| Conversions | Bonus Questions |
|---|---|
| 10 points | 10 points |
| 20 points | 20 points |
| 30 points | 30 points |
| 40 points | 40 points |
| 50 points | |

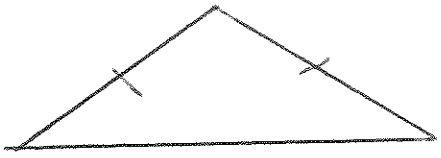
# Geometry Jeopardy

Polygons

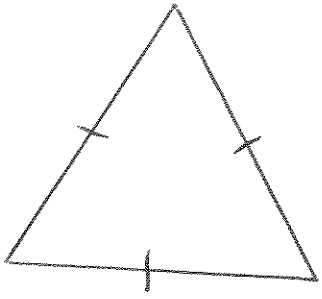
10 points-- What does the formula 180(n-2) used to determine?

20 points-- Give two adjectives for each of these triangles:

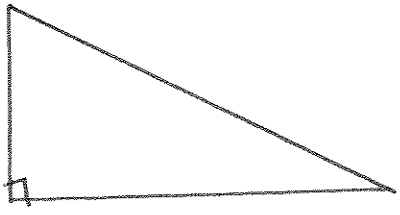
(a)



(b)



(c)



30 points-- Find the central angle for an 11-sided polygon.

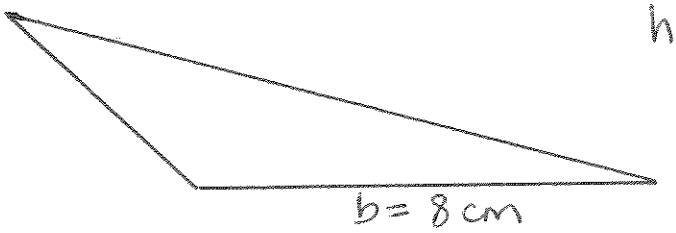
Polygons (continued)

40 points-- Give the formula used to calculate the interior angle measure for a regular n-gon.

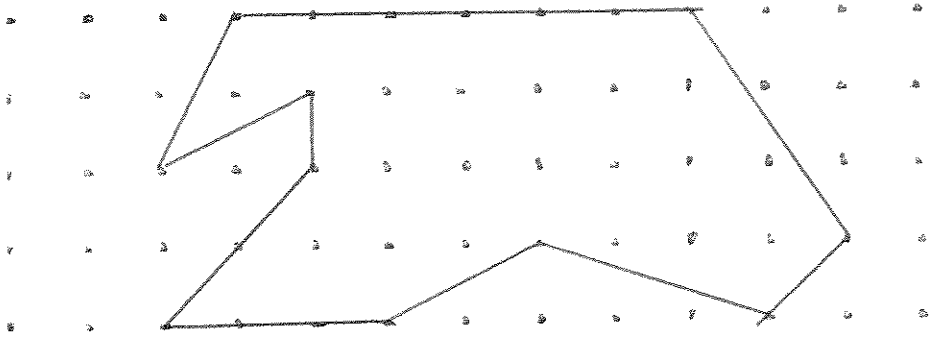
50 points-- Draw and label a Venn Diagram illustrating the relationship between T (trapezoids), I (isosceles trapezoids), P (parallelograms), and K (kites).

Area/Perimeter

10 points-- Find the area of the following triangle. (Draw height.)



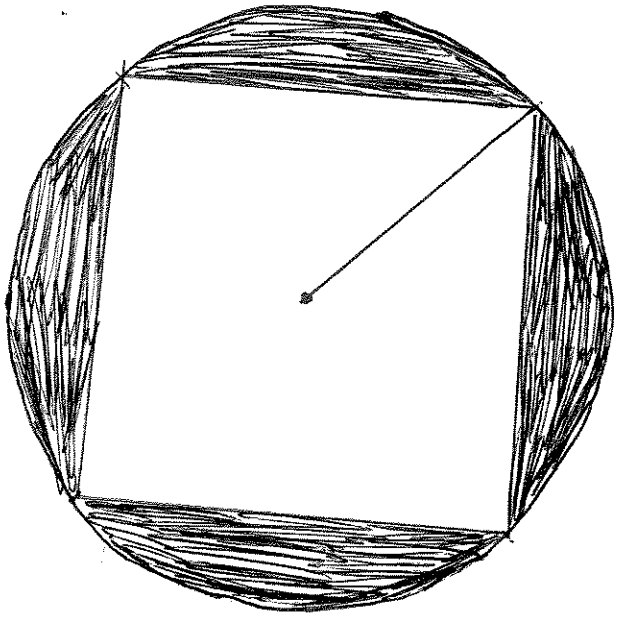

20 points-- Find the area of the following shape given that one grid square in one square unit of area.



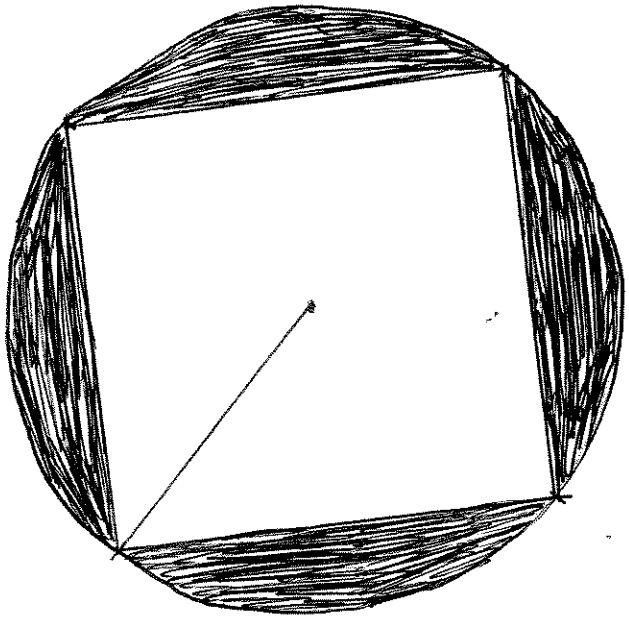
30 points-- Give a mathematically convincing argument for the formula for the area of a triangle.

Area/Perimeter (continued)

40 points-- Find the area of the shaded region in the following shape, given that the radius of the circle is 5 inches.



50 points-- Find the perimeter of the shaded region in the following shape, given that the side of the square is 3 meters.



Symmetry

10 points-- Which two types of quadrilaterals have horizontal, vertical and rotational symmetry?

20 points-- What symmetry does a regular pentagon have?

30 points-- What kind of symmetry does the word

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have?

40 points-- Which type of triangle always has only reflection symmetry?

50 points-- List the one type of quadrilateral that has no symmetry.

Hodge Podge

10 points-- What is the definition of pi?

20 points-- Which polygons tessellate any plane?

30 points-- Which regular polygons tessellate any plane?

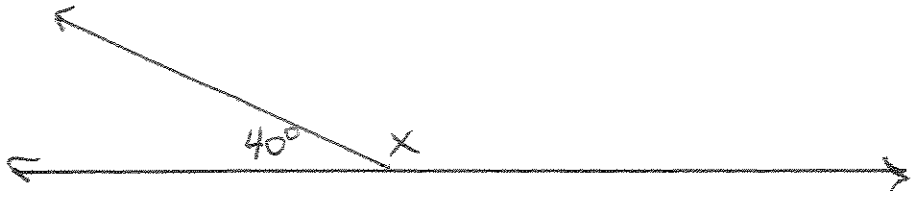
40 points-- On a baseball diamond the bases are 90 ft apart. What is the distance from home plate to second base in a straight line?

50 points-- Give the definition of convex.

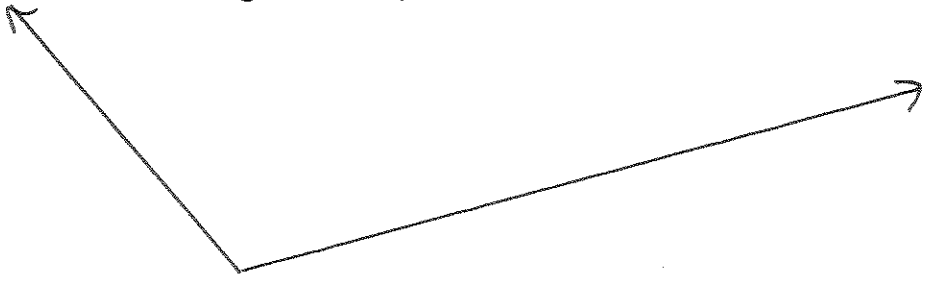
Angles

10 points-- What is the sum of the interior angles of a triangle? Give a brief, convincing argument.

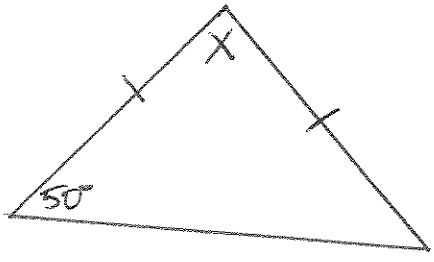
20 points-- Find the value of x in the following diagram.



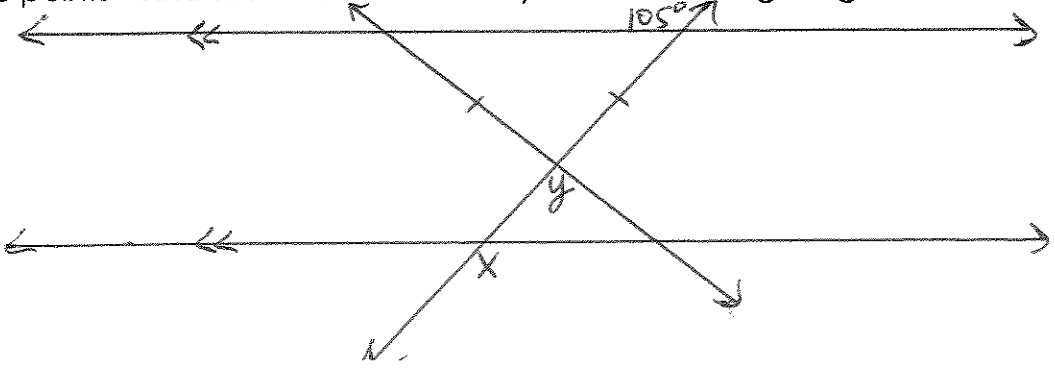

30 points-- Measure this angle with a protractor.



40 points-- Find the value of x in the following triangle.




50 points-- Find the values of x and y in the following diagram.



Conversions

10 points-- 5 cm = ?? dm

20 points-- 3 sq. ft. = ?? sq. in.

30 points-- 45 mi/hr = ?? m/sec

40 points-- If 2 gums = 1 jack and 3 jacks = 1 marble, then
7 gums is how many marbles?

50 points-- 3.6 liters = ?? tsp.

**Bonus**

10 points-- The units "squeaks squared" would measure what kind of measurement?

20 points-- List the two types of quadrilaterals that have only reflection symmetry.

30 points-- Give a convincing argument for the formula for the area of a trapezoid.

40 points-- Demonstrate a proof of the Pythagorean Theorem.