



George Washington Carver
High School of Engineering and Science
2019 Summer Enrichment

Name: _____

Advisory #: _____

GEOMETRY

- *If you are taking BOTH Geometry AND Algebra II in the fall of 2019, you will only need to complete the Geometry summer project this year.*
- *If you are TRIPLING UP with Geometry, Algebra II, and Precalculus in the fall of 2019, you will only need to complete the Geometry summer project this year.*

Due Wednesday September 11th

Student, you should check your own work to predict how well you will do on your summer project.

Scoring Rubric:

Guideline	Self-Check	Points Earned	Points Possible
Part A—Simplifying Expressions <ul style="list-style-type: none">• Answers (10)• Work (10)			20
Part B—Solving Equations <ul style="list-style-type: none">• Answers (10)• Work (20)			30
Part C—Rectangles—15 points total <ul style="list-style-type: none">• Plot points (8)• Draw Rectangle (2)• Area (2)• Perimeter (2)• Question (1)			15
Part C—Triangles—13 points total <ul style="list-style-type: none">• Plot points (6)• Draw Triangles (2)• Estimated Area (2)• Estimated Perimeter (2)• Question (1)			13
Part D—Logic Puzzle—22 points total <ul style="list-style-type: none">• Complete Grid Correctly (12 points)• Answer Questions (10)			22
TOTAL			100

Part A: Number Sense—Fully simplify the expression. Show all work.

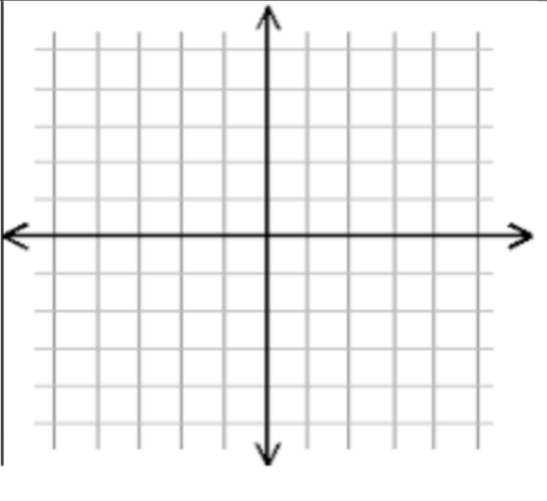
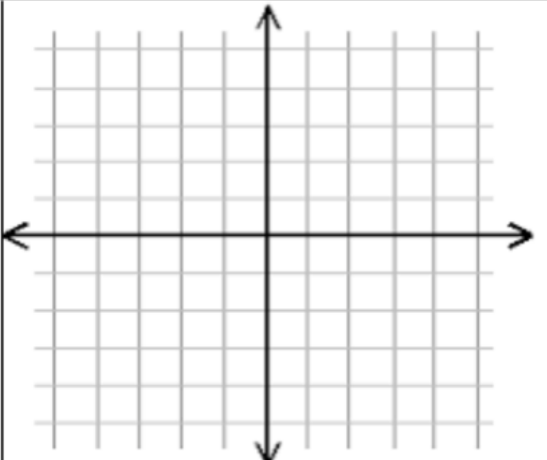
1.	$4 + 3 - 2 + 5 =$
2.	$6/2 + 1 - 8 * 2 =$
3.	$\frac{1 + 3(4 + 1)}{4} =$
4.	$18 \div 2 * 3 - 5(1 - 3)^2 =$
5.	$\frac{1}{3} + \frac{1}{4} =$
6.	$\frac{5}{8} * \frac{2}{3} =$
7.	$(3 + \sqrt{25} - 1)^2 =$
8.	$\sqrt{3^2 + 4^2} =$
9.	$6 + 2(3 - 5)^3 =$
10.	$\frac{1 - (-2)}{4} + \left(\frac{3}{2}\right)^2 =$

Part B: Solving Equations—Solve each equation for x.

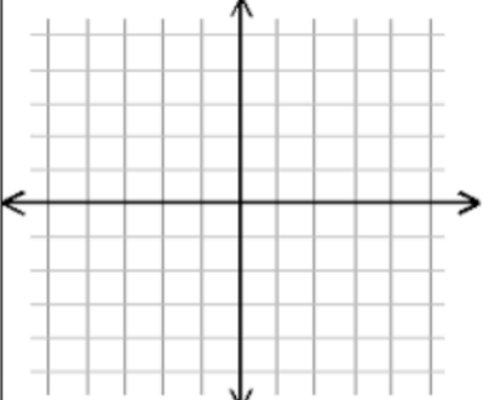
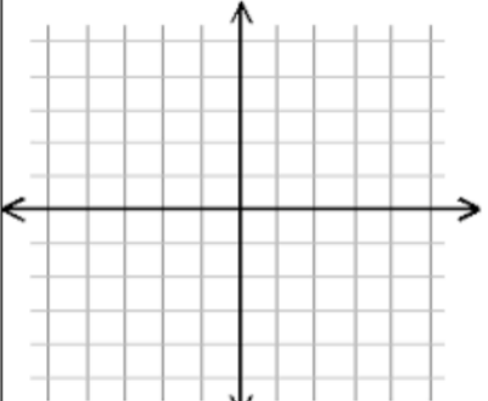
11.	$10x + 13 = 73$
12.	$5x + 17 = 2x + 5$
13.	$\frac{1}{3}x - 8 = 7$
14.	$\frac{1}{5}x - 2 = \frac{1}{3}x$
15.	$4(x + 2) + 4 = 36$
16.	$-2(x - 1) + 10 = 6(x + 8)$
17.	$x^2 = 25$
18.	$8x^2 = 72$
19.	$x^3 = -8$
20.	$\frac{x + 3}{x - 1} = 2$

Part C: Graphing Shapes, Finding Area, Finding Perimeter

- Plot the points A, B, C, and D on the coordinate axes provided.
- Connect the dots to create Rectangle ABCD.
- Find the perimeter of Rectangle ABCD.
- Find the area of Rectangle ABCD.

21.		<p>Points: A (3, 1), B (-2, 1), C (-2, -3), and D (3, -3)</p> <p>AREA =</p> <p>PERIMETER =</p>
22.		<p>Points: A (2, 5), B (-4, 5), C (-4, -3), and D (2, -3)</p> <p>AREA =</p> <p>PERIMETER =</p>
23. Do you know a way to calculate these without counting boxes? If so, explain:		

- Plot the points A, B, and C on the coordinate axes provided.
- Connect the dots to create Triangle ABC.
- Count the boxes to estimate the area of Triangle ABC. If you know a way to calculate the area exactly, please do so.
- Estimate the perimeter of Triangle ABC. If you know a way to calculate the perimeter exactly, please do so.


24.		<p>Points: A (0, 0), B (4, 0), and C (4, 3)</p> <p>ESTIMATED AREA =</p> <p>ESTIMATED PERIMETER =</p>
25.		<p>Points: A (-1, -2), B (-1, 3), and C (1, 3)</p> <p>ESTIMATED AREA =</p> <p>ESTIMATED PERIMETER =</p>
<p>26. Do you know a way to calculate these exactly without counting boxes? If so, explain:</p>		

Part D: Solve the logic puzzle. Fill out the grid as you work and then provide your answers at the end.

One Saturday five friends visited the zoo. Each wore a different colour t-shirt and each rushed to see their favourite animal upon arriving at the zoo. Using the clues provided, can you name each child's favourite animal and the colour t-shirt they wore?

1. One of the children wore the t-shirt that was the same colour as their favourite animal.
2. Steven, who was not wearing red, went to the Australian pavilion and Ashlee, who did not visit the lions, wore the yellow shirt
3. While visiting the King of the Jungle, Chase saw the girl with the red shirt at the monkey exhibit.
4. Paul, who did not like elephants, heard the boy in the purple t-shirt roaring.
5. On her way to visit the monkeys, Michelle passed Steven who was wearing the black t-shirt.

	Elephants	Kangaroos	Lions	Monkeys	Polar Bears	Black	Purple	Red	White	Yellow
Ashlee										
Chase										
Michelle										
Paul										
Steven										
Black										
Purple										
Red										
White										
Yellow										



ANSWERS:

Ashlee wore a _____ shirt and saw the _____.

Chase wore a _____ shirt and saw the _____.

Michelle wore a _____ shirt and saw the _____.

Paul wore a _____ shirt and saw the _____.

Steven wore a _____ shirt and saw the _____.