Perth Amboy High School

SUMMER ASSIGNMENT

Geometry Honors

As an incoming Geometry Honors student, it is important that you are proficient in several skills from previous math courses. The following exercises are intended to provide a review of the essential math skills you are expected to know as you enter Geometry Honors this September.

Use a pencil and **SHOW ALL WORK**. Work must be legible, well organized and solutions clearly labeled. You should show and/or explain how you arrived at all answers. Please do not wait until the last day of vacation to get started.

This assignment is due the first day of school. If you are unsure how to solve any of the problems, it will be to your advantage to review online. Suggested websites are:

http://www.coolmath.com/algebra

http://patrickjmt.com/

https://www.khanacademy.org/math/algebra1

www.math.com

Have a great summer and we look forward to meeting you in the fall.

Geometry Honors

Name_____

Linear Equations

Solve each of the following equations for x.

1. $2x - 3(x + 8) = -21$	2. $3x - 4(x - 4) + 4 = 13$	3. $6x = \frac{1}{2}(2x + 5)$

Solving Proportions

Solve for x.

4. $\frac{13}{6} = \frac{52}{x}$	5. $\frac{8}{12} = \frac{w}{w+2}$	6. $\frac{m+1}{4} = \frac{3m+6}{7}$

Factoring Quadratics

Factor completely each polynomial

7. $x^2 - 10x + 9$	8. $x^2 - 25$
9. $3x^2 - 10x + 8$	10.. $2x^2 + 2x - 4$

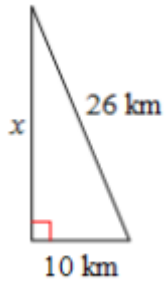
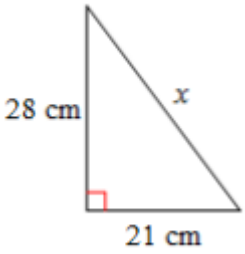
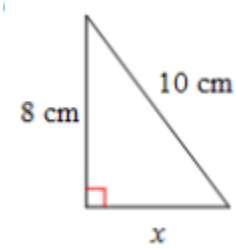
Radicals

Simplify each radical and leave in simplest radical form. No decimal answers.

11. $\sqrt{8}$	12. $\frac{\sqrt{54}}{\sqrt{2}}$
13. $-2\sqrt{45} \bullet 4\sqrt{2}$	14. $25 + \sqrt{36} + \sqrt{49}$

The Pythagorean Theorem

Find the missing side of each triangle.

15 	16. 	17. 

Area and Perimeter

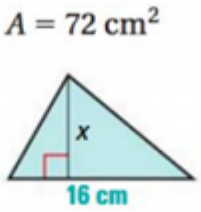
18. The rectangle has area an of 54 square inches. Write and solve an equation to find the value of x.

Equation: _____

x = _____

19. The triangle has rea A. Write and solve an equation to find the value of x

.

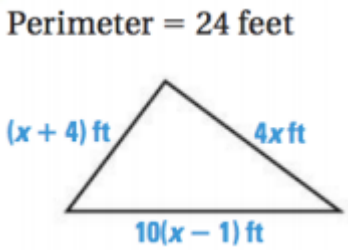


Equation: _____

x = _____

20. In a rectangle the length is 5 units more than 2 times the width. The perimeter is 22 units more than twice the width. Find the length and the width.

21. Write and solve an equation to find the value of x.

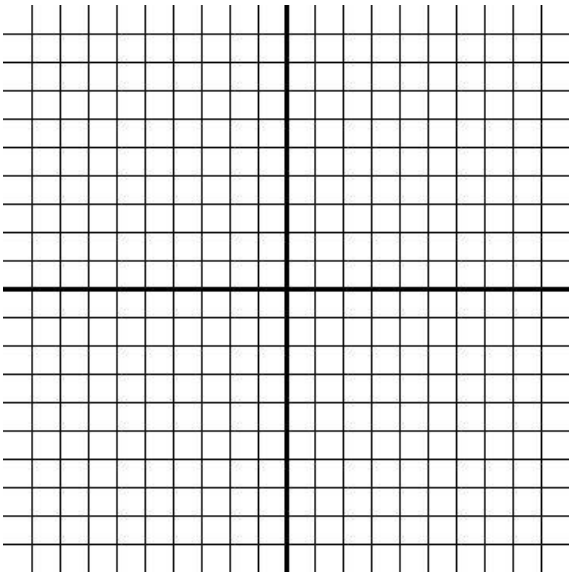


Equation: _____

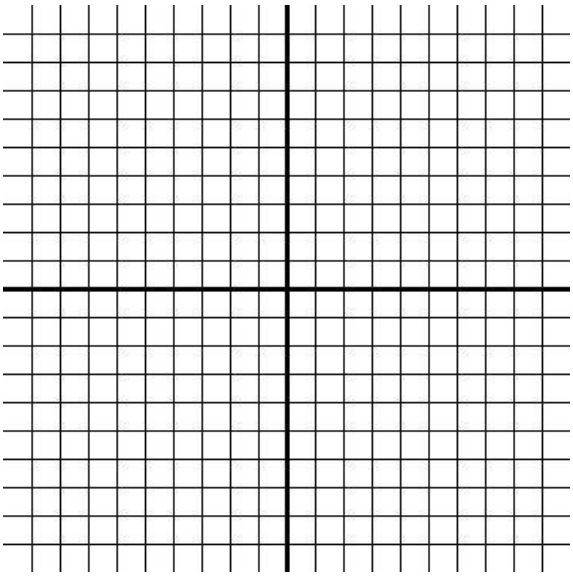
x = _____

Graphing Lines

22. Graph: $y = x + 4$

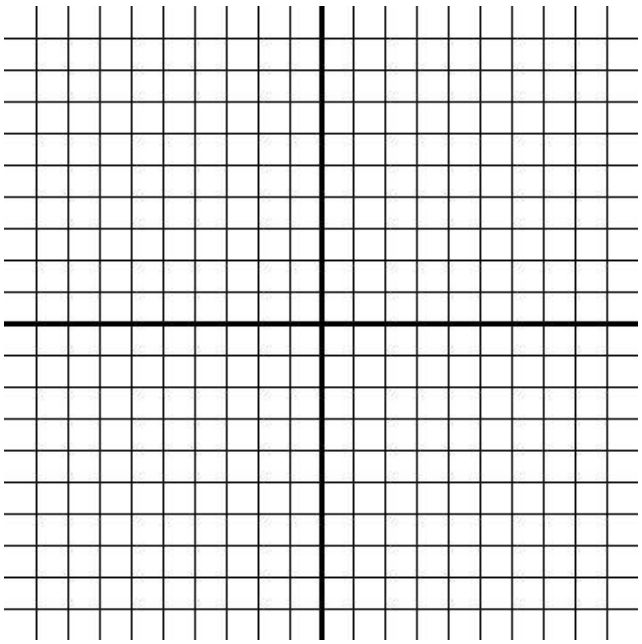


23. Graph: $2x + y = -8$



Reflections

24. A quadrilateral ABCD has vertices A(-4, 4), B(-3, 4), C(-1, 1) and D(-4, -1). Graph the quadrilateral and then reflect the figure over the y-axis.



Geometry Vocabulary

Match the vocabulary word on the left with the correct diagram on the right Use each only once.

____ Line

____ Ray

____ Segment

____ Point

____ Equilateral Triangle

____ Isosceles Triangle

____ Right Triangle

____ Acute angle

____ Obtuse angle

____ Right angle

____ Straight angle

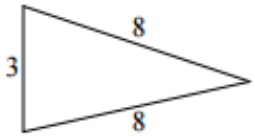
____ Radius

____ Diameter

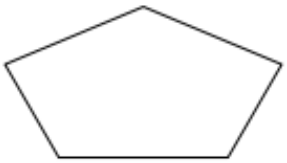
____ Quadrilateral

____ Pentagon

a.

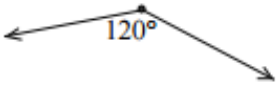


b.

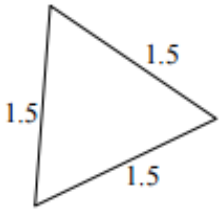


c.

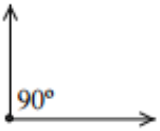
d.



e.



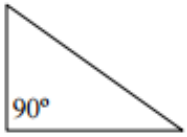
f.



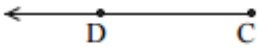
g.

h.

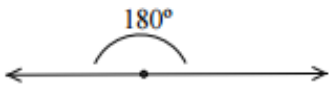
i.



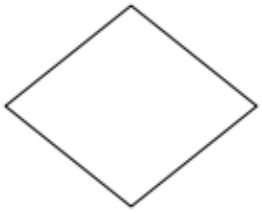
j.



k.



l.



m.

n.

o.