Name: _____

CCSD Math Summer Calendar

Entering Geometry

-Complete the Math Calendar and return to your math teacher on the first day of school.
-You may finish these at your own pace. Most weeks have a helpful, optional tutorial video link.
-Show ALL WORK on a separate sheet of paper with problem numbers CLEARLY labeled

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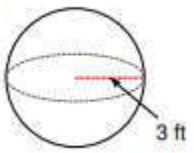
Week of June 1st: Spheres

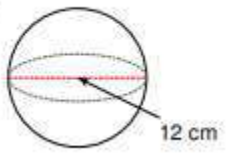
Video Links: https://www.youtube.com/watch?v=EbiwNnyDUoM

Problem 1a: Find the surface area of each sphere

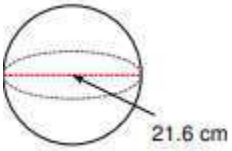
1)

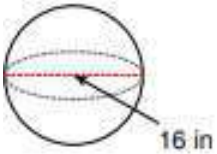


2)



Problem 2a: Find the volume of each sphere





Problem 3a: Find the surface area and volume of a sphere with radius 12 yd

Problem 4a: Find the surface area and volume of a sphere with diameter 10 cm.

Problem 5a: Find the surface area and volume of a sphere with radius 3 cm

Week of June 8th: Solving two-step equations

Video Link: https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-2-step-equations-intro/a/two-step-equations-review

Problem 1b: $5x + 5 = 125$

Problem 2b: $\frac{3}{4}\,x = 3$

Problem 3b: $6x - 6 = 42$

Problem 4b: $7x - 10 = 39$

Problem 5b: $10x - 46 = 4$

Week of June 15th: Perimeter and Area of Parallelograms

Video Link: https://www.youtube.com/watch?v=LoaBd-sPzkU

Problem 1c: A rectangle measures 25 cm by 10 cm. What is its area?

Problem 2c: The length of a rectangle is 12 cm and the area is 96 cm^2. What is the width?

Problem 3c: I need to buy a carpet for a room that measures 3 m by 2 m. How many square meters do I need?

Problem 4c: A rectangular piece of paper has a width of 16" and an area of 192 in2 . What is its length?

Problem 5c: A chessboard has an area of 100 square inches. What is its perimeter?

Week of June 22nd: Similar Figures

Video Link: https://www.youtube.com/watch?v=tm-_6sFdfk8

Problem 1d: A 6 ft tall tent standing next to a cardboard box casts a 9 ft shadow. If the cardboard box casts a shadow that is 6 ft long then how tall is it?

Problem 2d: A telephone booth that is 8 ft tall casts a shadow that is 4 ft long. Find the height of a lawn ornament that casts a 2 ft shadow.

Problem 3d: A map has a scale of 3 cm : 18 km. If Riverside and Smithville are 54 km apart then they are how far apart on the map?

Problem 4d: Find the distance between Riverside and Milton if they are 12 cm apart on a map with a scale of 4 cm : 21 km

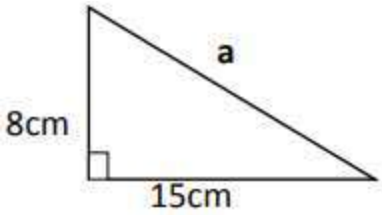
Problem 5d: A model house is 12 cm wide. If it was built with a scale of 3 cm : 4 m then how wide is the real house?

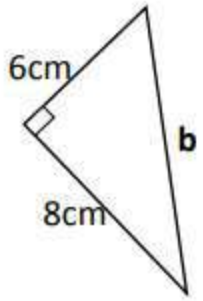
Week of June 29th: Pythagorean Theorem

Video Link: https://www.youtube.com/watch?v=AA6RfgP-AHU

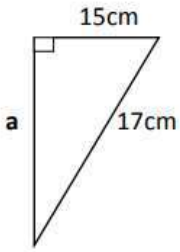
Problem 1e: What is the Pythagorean theorem?

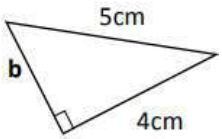
Problem 2e: Find the hypotenuse of the following triangles



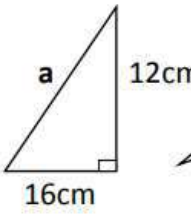


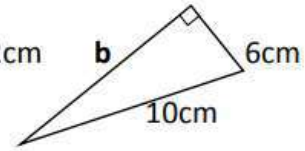
Problem 3e: Find the sides labelled with letters





Problem 4e: Find the perimeter of the following triangles





Problem 5e: A rectangular swimming pool is 21 meters wide and 50 meters long. Calculate the length of the diagonal to 1 decimal place.

Week of July 6th: Literal Equations

Video Link: https://www.khanacademy.org/math/algebra-home/alg-basic-eq-ineq/alg-old-school-equations/v/solving-for-a-variable

Problem 1f: Solve $d = rt$ for t.

Problem 2f: Solve $A = \frac{bh}{2}$ for h.

Problem 3f: Solve $A = \frac{(b_1 + b_2)h}{2}$ for b_2.

Problem 4f: Solve $m = \frac{y_2 - y_1}{x_2 - x_1}$ for y_1.

Problem 5f: Solve $F = \frac{lt}{d}$ for l.

Week of July 13th: Linear equations

Video Links: https://www.youtube.com/watch?v=9hryH94KFJA

Problem 1g: What does it mean for 2 lines to be parallel?

Problem 2g: What does it mean for 2 lines to be perpendicular?

Problem 3g: What are the equations for point-slope form and slope-intercept form?

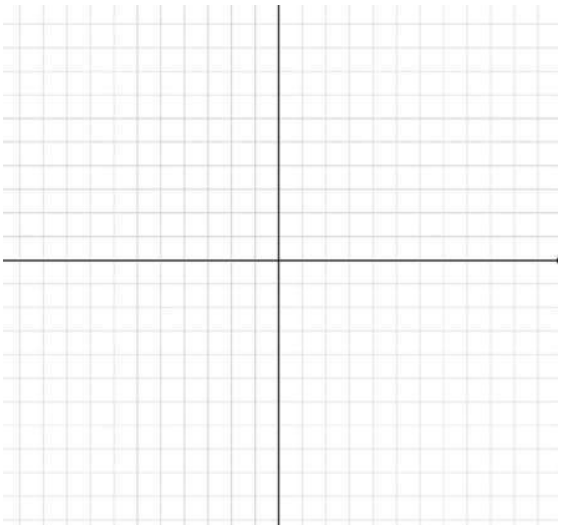
Problem 4g: How can you determine from 2 equations whether or not 2 lines are parallel or perpendicular? Give examples

Problem 5g: Find the equation of the line that runs through points (0,2) and (2.6)

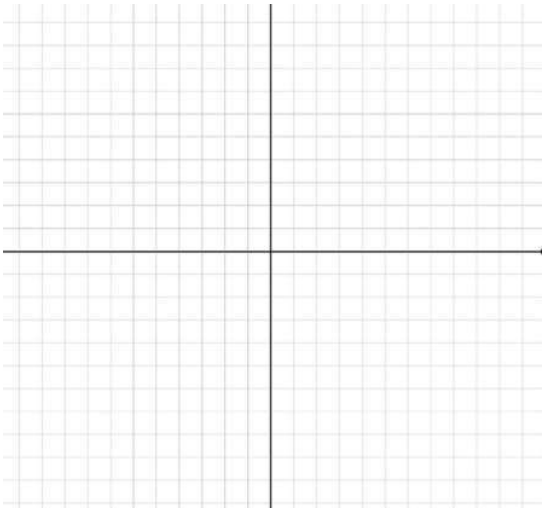
Week of July 20th: Transformations

Video Link: Complete research to determine the answers to the following questions

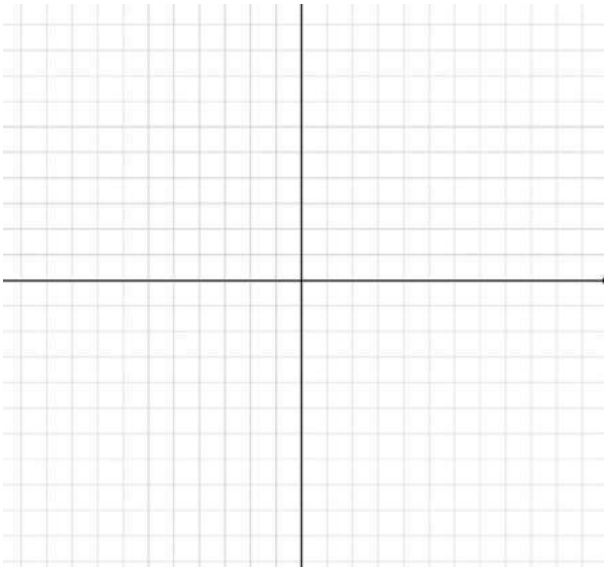
Problem 1h: What is a translation? Draw an example on the following coordinate plane



Problem 2h: What is a reflection? Draw an example on the following coordinate plane



Problem 3h: What is a rotation? Draw an example on the following coordinate plane



Problem 4h: What is a dilation? Draw an example on the following coordinate plane