Name: _____

CCSD Math Summer Calendar

Entering 8th Grade

-Complete the Math Calendar and return to your math teacher on the first day of school.
-You may finish these at your own pace. Each week has a topic with 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: Laws of Exponents

Video Link: https://www.youtube.com/watch?v=g5ZGDNxJwxA

Problem 1a: $\frac{5^3}{5^2}$

Problem 2a: $(4^3)^2$

Problem 3a: 10000^0

Problem 4a: $7^3 \times 7^4$

Problem 5a: 10^{-2}

Week of June 8th: Converting decimal numbers to fractional equivalent

Video Link: https://www.khanacademy.org/math/arithmetic/arith-decimals/arith-review-decimals-to-fractions/v/converting-decimals-to-fractions-1-ex-1

Problem 1b: .1=

Problem 2b: .25=

Problem 3b: .025=

Problem 4b: .205=

Problem 5b: .142=

Week of June 15th: Classification of numbers

Video Link: https://www.youtube.com/watch?v=-QHff5pRdM8

Problem 1c: Define "whole numbers" and give 3 examples

Problem 2c: Define "natural numbers" and give 3 examples

Problem 3c: Define "integer numbers" and give 3 examples

Problem 4c: Define "rational numbers" and give 3 examples

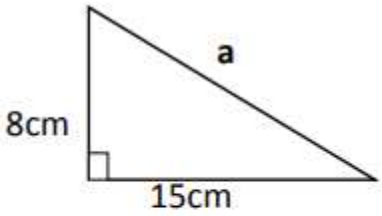
Problem 5c: Define "irrational numbers" and give 3 examples

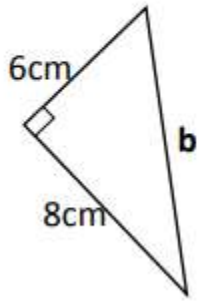
Week of June 22nd: Pythagorean Theorem

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

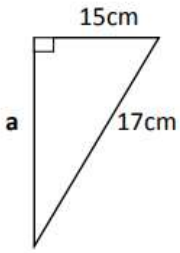
Problem 1d: What is the Pythagorean theorem?

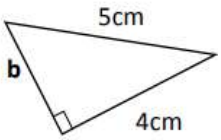
Problem 2d: Find the hypotenuse of the following triangles



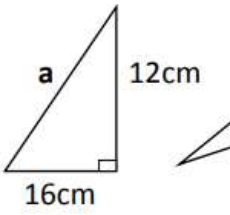


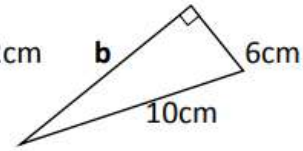
Problem 3d: Find the sides labelled with letters





Problem 4d: Find the perimeter of the following triangles





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

Week of June 29th: 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 1e: $5x + 5 = 125$

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

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

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

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

Week of July 6th: Converting fractions to decimal equivalents

Video Link: https://www.khanacademy.org/math/arithmetic/arith-decimals/arith-review-decimals-to-fractions/v/converting-fractions-to-decimals-example

Problem 1f: $\frac{3}{4} =$

Problem 2f: $\frac{4}{5} =$

Problem 3f: $\frac{7}{8}\ =$

Problem 4f: $\frac{14}{16}\ =$

Problem 5f: $\frac{117}{200}\ =$

Week of July 13th: Similar Figures

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

Problem 1g: 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 2g: 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 3g: 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 4g: 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 5g: 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 July 20th: Scientific Notation

Video Link: https://www.youtube.com/watch?v=Q_klLmTSyyw

Problem 1h: When is scientific notation utilized?

Problem 2h: Convert the following to scientific notation

a. 18,500,223 b. 275,000,000,000

Problem 3h: Convert the following to scientific notation

a. 0.000025 b. 0.0031

Problem 4h: Convert the following to decimal notation

a. 1.5×10^{3} b. 13.8×10^{6}

Problem 5h: Convert the following to decimal notation

a. 1.5×10^{-3} b. 13.8×10^{-6}