10/31/2024 – Equations and Inequalities

Review of Unit 1 for Grade 7 and 8 Math (7A and PreAlgebra) – Fun theme: Mystery Numbers

Questions to follow along with show. Watch: Math Homework Hotline

1) What is the solution to the equation below? (MA.7.AR.2.2)

$$\frac{k}{4} - 1 = -4$$

2) What is the solution to the equation below? (MA.8.AR.2.1)

$$6(2x - 4) - 9 = -\frac{1}{3}(7x + x)$$

3) Explain the difference between a linear equation having no solution, one solution, and infinitely many solutions. Give an example of each. (MA.8.AR.2.1)

	Description	Example
No Solution		
One solution		
Infinitely many solutions		

4) What is the solution to the equation below? (MA.8.AR.2.1)

$$\frac{-4}{3}(6 - n) - 5 = -3$$

5) What two integers does $\sqrt{31}$ fall between? (MA.8.NSO.1.1)

6) Order the numbers from least to greatest. Identify which numbers are irrational. Write an inequality that compares a rational number and an irrational number. (MA.8.NSO.1.2)

$$\frac{1}{3} \quad -\sqrt{31} \quad \sqrt[3]{-31} \quad \sqrt[3]{13} \quad -\pi$$

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7) What is the value of h in each equation? (MA.8.AR.2.3)

a) $h^3 = -343$

b) $h^2 = 121$

8) Solve the inequality and graph the solution on a number line. (MA.8.AR.2.2)

$$5(3 - y) \geq 15$$

9) Solve the inequality and graph the solution on a number line. (MA.8.AR.2.2)

$$3m - 2 > -5$$

10) Solve the inequality and graph the solution on a number line. (MA.8.AR.2.2)

$$2w - 4 < 3 - 7w + w$$