Math Review: Just The Qs

1 Associated, Commutative, and Distributive Laws

Question: Expand: $(2x + x - 4)y$
Answer:

Question: Simplify: $4(x + 3) - 3(-x - 2)$
Answer:

Question: Does $4 - (1 * 4)$ equal $(4 - 1) * (4 - 4)$?
Answer: Does this show that subtraction distributes over multiplication?

2 Working with Fractions

Question: Simplify: $\frac{x - 3}{4} - \frac{2x + 1}{3}$
Answer:

Question: Simplify: $\frac{\frac{x + 1}{6}}{\frac{3}{x}}$
Answer:

Question: Simplify: $\frac{x^2}{y}$
Answer:

3 The Modulo Operator

Question: Evaluate: $14/4$ and $14 \% 4$.
Answer:

Question: List three integers that are each congruent to 17, modulo 6.
Answer:

4 Exponents and Logarithms

Question: Evaluate $2^6$, $5^{-3}$, and $3^{2/2}$.
Answer:

Question: Evaluate $4^{\log_{4} y}$, $\log_{2}(2^x)$, $\log_{3} 81$, and $\log_{3} 125 - \log_{3} 1$.
Answer:

Question: Express $\log_{3}(2^x)$ using $\log_{10}$.
Answer:

5 Factoring Quadratics

Question: Factor $x^2 - 3x - 4$, $3x^2 - 5x + 2$, and $3x^2 + 12x + 9$.
Answer:
6  The Quadratic Formula

Question: Solve: \(3x^2 - 10x + 8 = 0\) both with and without using the quadratic formula.

Answer:

7  Laws of Inequalities

Question: True or False: \(-2 < -3\)? \(12 \leq 12\)? \(1.5 > 1.5\)?

Answer:

Question: Solve for \(x\): \(5x + 2 \leq x + 12\) and \(-4x \geq 9\).

Answer:

8  Summation and Product Notation

Question: Evaluate: \(\sum_{i=2}^{4} \frac{i}{3}\), \(\sum_{i=1}^{5} i + 6\) (careful...), and \(\prod_{i=1}^{5} i + 6\).

Answer:

9  Number Systems

Question: Convert \(749_{10}\) to binary, octal, and hexadecimal.

Answer:

Question: Convert \(101111001101_{2}\) to octal, hexadecimal, and decimal.

Answer: