

Check your answers with the puzzle you were provided with in class! The solution to the puzzle is: PEACE, LOVE, HOPE, AND JOY FOR ALL! 😊

* Simplify:

$$4 + (-5 - 3)^2 - 3 * |3 - 5|$$

* Solve for x.

$$-(2x - 1) = 2(x + 7) - 25$$

* Solve for x.

$$x - |2 - x| = 20$$

* Adrian is six years older than his sister, Joan.

The sum of their ages is 48. How old is Joan?

* 100 CHS students were asked about the GPA they would like to have by the end of their high school career. On average, respondents said they wanted a 3.5 with a standard deviation of .2. Determine the z-score for a student who wants a 3.2.

* 100 CHS students were asked about the GPA they would like to have by the end of their high school career. On average, respondents said they wanted a 3.5 with a standard deviation of .2. Joe's corresponding z-score is 2. What is Joe's GPA?

* A collection of data shows that the average speed of cars on a highway is 67 miles per hour, with a standard deviation of 3.5 miles per hour. What percent of cars would you expect to be traveling between 67 mph and 70.5 mph?

* A collection of data shows that the average speed of cars on a highway is 67 miles per hour, with a standard deviation of 3.5 miles per hour. If the speed limit is 60 mph, what percent of the cars would you expect to be speeding?

* A collection of data shows that the average speed of cars on a highway is 67 miles per hour, with a standard deviation of 3.5 miles per hour. The speed limit is 60 mph. A police officer is directed to issue tickets to any cars traveling 14 mph above the speed limit or more. If data is collected for 250 cars, how many tickets would you expect the officer to issue?

* A student found that 99.7% of the songs on his iPod were between 3 minutes and 7.8 minutes long, with a standard deviation of 0.8 minutes. Estimate the mean length of a song, in minutes, on this student's iPod.

* Line Z is perpendicular to the line given by the equation $3y - 9x = -108$ and passes through the points $(2,0)$ and $(x, x+2)$. Determine the value of x .

* A swimming pool is being drained at a constant rate. After two hours, the height of the water is 4.5 feet, and after five hours, the height of the water is $2\frac{1}{4}$ feet. How many hours will it take for the height of the water to be exactly 0.75 feet?

* Consider the function $f(x) = -2(x + 2)^2 - 9$. What is the magnitude of the translation to the left?

* Consider the function $f(x) = -2(x + 2)^2 - 9$. By what factor is the graph stretched from the parent?

* What y -value is the start of the range for any function $g(-x - 9) + 4$?

* What x -value is the start of the domain for any function $2g(x - 8) + 3$?

* What is the x-coordinate of the vertex of the inequality $y \leq \frac{1}{2}x + 1$?

* What is the value of y at the y-intercept of the line $-4x - 3y = 24$?

* What is the value of x at the x-intercept of the line $-4x - 3y = 24$?

* Simplify:

$$|2m - 3| * 5(r)^2 - \sqrt{(3 + b)} + 1$$

$$b = 13; m = 1; r = -2$$

* Mr. and Mrs. Ryan build and sell nesting boxes for small birds. They sell each box for \$19.95. So far this month, they have built and sold 74 boxes. Each box costs \$8.25 to make. If their goal is to earn at least \$2,000 in revenue, how many more boxes must they make and sell?

