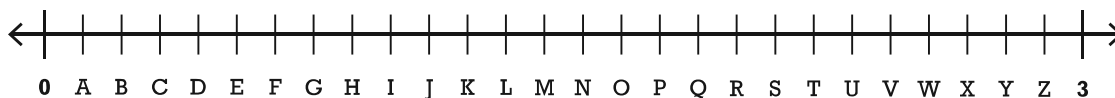# Warm-Up 2

41. _____ froops    On the island of Barteria, 5 glorps can be traded for 3 plaps, and 2 plaps can be traded for 1 froop. Brian gives Tina 35 glorps in exchange for 15 plaps. How many froops would Tina have to give Brian in addition to the plaps to make the trade fair?

42. _____    What is the value of $\dfrac{11^2 - 1}{5^2 - 1}$ ?

43. _____    Elliott Middle School has 3 grades, 6th through 8th, with 6 teachers per grade. There are 148, 152 and 168 students in each grade, respectively. What is the ratio of teachers to students in the entire school? Express your answer as a common fraction.

44. _____    The letters of the alphabet are equally spaced on a number line between 0 and 3, as shown. Which letter occurs at 2 on the number line?
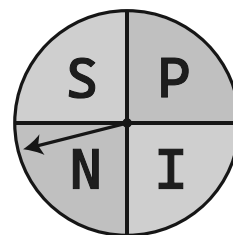


0 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 3

45. _____    If 57 percent of 200 equals 300 percent of $x$, what is the value of $x$?

46. _____ grams    Todd's trainer recommends that he consume 2400 calories a day and that 30% of his calories should come from protein. If 1 gram of protein contains 4 calories, how many grams of protein should Todd consume daily?

47. _____ integers    How many positive four-digit integers exist such that the product of the digits is 7!?

48. _____    If $5x + 9 = 37$, what is the value of $15x + 16$?

49. _____ spins    Leonard has a spinner with four equal parts labeled S, P, I and N, which he spins 72 times. What is the expected number of spins that land on the letter P?



50. _____ rec-tangles    How many rectangles with integer side lengths can be traced out of a 1 × 3 grid of unit squares, with the sides of the rectangles along the grid lines?