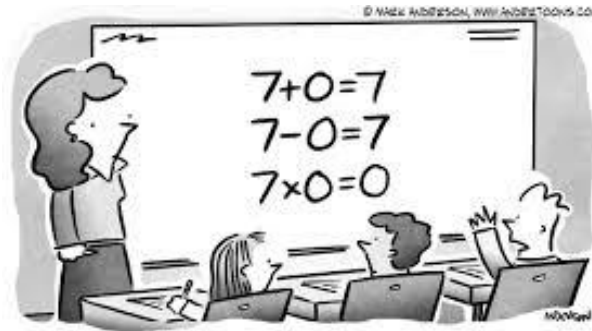


Fourteenth Annual PI Competition

5th Grade Team Test



"So the takeaway here is, if I'm the number 7, avoid multiplication at all costs."

5th Grade Team Problem 1

The first ten digits of pi are 3.14159265

Let $S = \pi$ rounded to the nearest tenth

Let $A = \pi$ rounded to the nearest thousandth

Let $M = \pi$ rounded to the nearest hundredth

Let $L = \pi$ rounded to the nearest whole number

What is $S + L + A + M$

5th Grade Team Problem 2

Consider the following set of numbers: $\{1, 3, 2, 2, 9, 7, 6, 6, 2, 5, 1\}$

Let R = the mean of this set of numbers

Let A = the mode of this set of numbers

Let B = the range of this set of numbers

Let K = the median of this set of numbers

What is $(BA) + R + K$

5th Grade Team Problem 3

Let B = the number of sides on a decagon

Let R = the area of a 4 by 8 rectangle

Let C = the volume of a rectangular prism with length 4, width 2, and height 6

Let A = the 5th prime number

What is $C - R - A + B$

5th Grade Team Problem 4

Let $A = 2+7$

Let $B = 13$ the value of A

Let $C = 5$ less than 7 times the value of B

Let $D =$ one quarter of C

What is $(AB) - (C/D)$

5th Grade Team Problem 5

A class of 34 students has 16 girls. 4 girls wear glasses, and 6 boys wear glasses.

Let $M =$ the ratio of girls to boys

Let $A =$ the ratio of girls with glasses to girls in the class

Let $O =$ the ratio of boys with glasses to boys in the class

What is $M \times A \times O$? Express your answer as a fraction in simplest form.

5th Grade Team Problem 6

Let D = the only prime number between 44 and 50

Let O = the number of vertices on a sphere

Let Y = the number of minutes in an hour

Let A = the number of lines of symmetry in a square

What is $(YO) + (DA)$

5th Grade Team Problem 7

Kristine's Pie Shop is selling discounted pies for Pi Day!

Let P = the sale price of an \$8 pie discounted 20%

Let I = the amount discounted from a \$10 pie that was marked down 55%

Let E = the original cost of a pie that was discounted 25% and sold for \$9

Let S = the sale price of a \$6 pie discounted 40%

What is $P+I+E+S$

5th Grade Team Problem 8

You have a bag filled with 36 marbles. 12 of them are blue. 6 of them are red. 8 of them are yellow. The rest are green. You then select one marble out of the bag without looking at the colors.

Let R = the number of green marbles

Let G = the probability that you would select a red marble

Let A = the probability that you would select a yellow marble

Let B = the probability that you would select a green marble

What is $G \times R \times A + B$? Express your answer as a fraction in simplest form.

5th Grade Team Problem 9

Let A = the number of inches in a foot

Let L = the number of feet in a yard

Let O = the number of centimeters in a meter

Let H = the number of hours in 3 days

What is $\frac{H}{A} \times \frac{L}{O}$? Express your answer as a fraction in simplest form.

5th Grade Team Problem 10

$$\text{Let } R = (3 \times 2)^2$$

$$\text{Let } A = 12 - 5 \times 2 + 9$$

$$\text{Let } B = 18 \div 3 + 3 \div 3$$

$$\text{Let } E = 4^2 + 3^2 \times 2(1 + 3)$$

What is $B + E + A + R$
