

Please submit solutions or problem suggestions for further issues to PSA 734. Old issues are available online at <http://mathpost.la.asu.edu/~sieben>.

1) Find the value of

$$\sum_{n=1}^{\infty} \frac{n}{2^n}.$$

(contributed by D. Drinen)

2) We want to know the amount of fish in a lake. So we catch 100, paint them red and release them back into the lake. The next day we catch 100 again, and we see that 25 of them are red. How many fish are in the lake?

* 3) There are three pieces of cheese in a cheese box. All of them have $\alpha = 60^\circ$ at the center. Show that the roaches A , B and C at the interval middle points are at the same distances from each other. (first year high school test problem)

