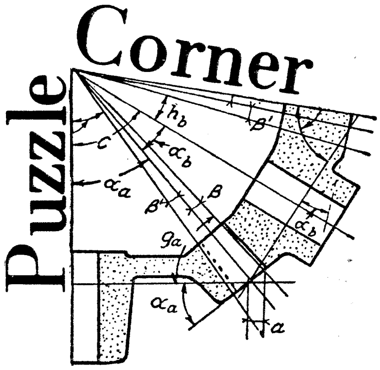

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As usual there was a misprint in the last issue and, as usual, it occurred in little guy's problem. This time, however, it was the printer's fault *(isn't it always — ed.)*. The second sentence of problem 22 should read: Define the distance set of (a_α) to be (b such that $b = a_\beta - a_\gamma$).

Since this is the last issue till next year, no regular problems will appear. Answers to last month's problems will appear in the first issue next term.

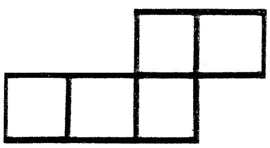
SPEED department

29 — My former roommate is now top undergraduate hustler. Hence the following addition problem:

```
  GOOD
+  JOB
  DOUG
```

Hint: D plus G, which equals O plus 1, is prime.

30 — Assume the following figure is made of matchsticks:



Move two matchsticks and get a figure with only four identical squares.

solutions

15 — 2 half-planes with edge in common, *2 regions.*
2 half-planes without edges in common, *1 region.*
3 half-planes with no edge in common not cutting each other, *1 region.*
3 half-planes with edge in common, *3 regions.*
2 half-planes with edge in common, third half-plane entirely in larger region, *2 regions.*
2 half-planes with edge in common, third half-plane dividing the smaller region, *3 regions.*
2 half-planes with edge in common, third half-plane in both regions, *2 regions.*
3 half-planes with no edge in common, but cutting each other, *2 regions.*
n half-planes with a common intersection *(the origin — ed.)* *1 region.*
k pairs of half-planes, each with common edge, $2(k^2 - k + 1)$ *regions. (each pair must intersect each of the others non-trivially — ed.).*

The *MAA* gives no proof that these cases are exhaustive. *I would welcome such a proof and offer a free subscription to* TEN *to the first person who sends a reasonable demonstration to me — ed.)*

16 — I have, as yet, no solution for this *Friedman Problem.*

17 — P is a multiple of 3 (9) if the sum of its digits is a multiple of 3 (9). P is a multiple of 11 if the sum of its digits in the odd places minus the sum of its digits in the even places is a multiple of 11.

18 — The following solution is due to De Moivre:

34	49	22	11	36	39	24	1
21	10	35	50	23	12	37	40
48	33	62	57	38	25	2	13
9	20	51	54	63	60	41	26
32	47	58	61	56	53	14	3
19	8	55	52	59	64	27	42
46	31	6	17	44	29	4	15
7	18	45	30	5	16	43	28

19 — Gerald Ruderman, '68, needed only 97 characters to remove the vowels from a sentence. The language which he used was SNOBOL, a string manipulative language developed at Bell Labs. *(Unfortunately, his program has an error in it. What follows is a slightly modified version having 99 characters — ed.).*

```
S SYS .READ *T* " " /F(END)
 O = "AEIOU"
A O *V/"1"* = /F(R)
B T V = /S(B)F(A)
R SYS .PRINT T /(S)
END S
```

■