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Actuary joins Society staff

Judy L. Strachan, FSA 1983, has joined the Society of Actuaries staff as the education actuary working in the Financial and Investment Management Practice area. She was formerly the general director of finance for John Hancock Mutual Life Insurance Company's Career Agency Distribution System.

"Judy Strachan's experience in a nontraditional function will be an asset as the Society continues to define techniques and extend knowledge of our students in emerging financial and investment areas," Marta Holmberg, education executive, said.

Strachan worked with senior management of John Hancock's sales department to control expenses and to analyze the future effect of suggested policy changes on the department's competitive position and its Profit (Loss) statements.

"I look forward to working with the E&E committees," Strachen said. "It's

Judy L. Strachan
SOA Education Actuary

important that our educational plans and exams include the skills upcoming actuaries need to be successful in these non-insurance areas."

Explanation of Canadian mail delay

By trying an alternative mail service, the Society's mailing of ASA and FSA grades to our Canadian students this July was delayed. We recognize the frustration and inconvenience experienced by those affected. We apologize and believe we owe our Canadian members and candidates an explanation.

In the past three years, the Society's use of an alternative to the usual first class mail to Canada had resulted in enhanced delivery times at reduced cost. However, when we tried it for the ASA and FSA grades mailed on

July 9 and 16, respectively, the service jammed on us. As a result, Canadian students experienced an unacceptable delay of approximately two weeks in receiving their grades. Although it does not replace written confirmation, fortunately the exam hotline was operative during this time, so candidates were not kept in suspense as to whether they had passed or failed.

We wish to assure our Canadian members and candidates that we will resume using the regular Canadian postal system for exam results.

Pearl puzzle solution:

Let
Y_i = Number of pearls found by the ith person.

Clearly, the number of pearls found by the mother denoted by Y_{k+1} is given by
$Y_{k+1} = km$, (m is unknown), and Y_i's satisfy the recurrence relation given by
$Y_{k-t} = a\, Y_{k-t+1} + 1$,
$t = 0,1,...,k-1$,
where $a = k/(k-1)$.

Hence, the number of pearls brought by the father is ,
$$Y_1 = a^k km + (a^k - 1)(k-1),$$
$$= k^k \frac{km+k-1}{(k-1)^k} - (k-1).$$

The number Y_1 will be an integer if $(km+k-1)$ is a multiple of $(k-1)^k$ i.e.,
$km+k-1 = P(k-1)^k$.
Thus,
$$m = \frac{(k-1)\{P(k-1)^{k-1}-1\}}{k}.$$

The number m will be an integer if $P(k-1)^{k-1}-1$ is a multiple of k. Two cases arise:
i) when k is odd,
$P(k-1)^{k-1}-1 = P-1$
$- Pk(1- ... + k^{k-2})$.
Thus m will be an integer if
$P = k1+1, 1 \in NU\{0\}$
ii) when k is even,
$P(k-1)^{k-1}-1 =$
$Pk((k-1)+...+k^{k-2}) - (P+1)$.
Thus m will be an integer if
$P = k1-1, 1 \in N$.
Thus the number of pearls brought by the father is given by
$Y_1 = Pk^k k+1$,
where
$P = k(1-1)+1$ when k is odd
$= k1-1$ when k is even
in both the cases $1 \in N$.