

Problems of the Month

February 2017

General Problem:

A stock is an investment that can change value over time. Some stocks provide dividends that they pay money directly to their owners. One particular stock is bought for \$50 at the beginning of the year. There are three dividends that are paid to its owner, each dividend is \$2. Toward the end of the year, the owner sells the stock for \$49.

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What is the rate of return on this owner's investment? Give your answer as a percentage of the original \$50.

Calculus Problem:

Find the derivative of the function below.

$$f(x) = e^{(x^2)^{x^2}}$$

Calculus!

Challenge Problem:

Find all four digit sequences that match the following clues.

2801 2107 1203 3002

In each clue there are as many ones as there are correctly placed digits.

