$\qquad$
Using the following information, set up the calculations (write out equations and plug in the numbers) needed to determine the value of a put on Goldman Sachs that expires on June 21, 2013 ( 65 days from today) and which has a strike price of \$145. You plan to hold this put only through May 17, 2013 ( 30 days from today). Risk-free interest rates (all less than 1\%) vary by maturity as follows: $5 / 16=0.030 \%$, $5 / 23=0.020 \%, 5 / 30=0.035 \%, 6 / 6=0.040 \%, 6 / 13=0.036 \%, 6 / 20=0.041 \%, 6 / 27=0.042 \%$, $7 / 5=0.046 \%, 7 / 11=0.056 \%, 7 / 18=0.051 \%$, and $7 / 25=0.057 \%$. Note: All of the following are per-share data related to Goldman Sachs.

| Actual or expected values as of: |  |  |  |
| :--- | ---: | ---: | ---: |
|  | $\underline{4 / 17}$ | $\underline{5 / 17}$ | $\underline{6 / 21}$ |
| Assets | 1138 | 1133 | 1130 |
| Stock | 143 | 140 | 138 |
| Debt | 995 | 993 | 992 |


| Expected standard deviation between now and: |  |  |  |
| :--- | :---: | :---: | :---: |
|  | $\underline{4 / 17}$ | $\underline{5 / 17}$ | $\underline{6 / 21}$ |
| Assets | $20 \%$ | $22 \%$ | $23 \%$ |
| Stock | $30 \%$ | $32 \%$ | $34 \%$ |
| Debt | $10 \%$ | $12 \%$ | $13 \%$ |
| Equivalent call | $90 \%$ | $92 \%$ | $95 \%$ |
| This put | $88 \%$ | $89 \%$ | $91 \%$ |

## Wall Street Journal Questions are on the back of this page.

