

4.1 There are 89 days between February 15, 2001, and May 15, 2001. There are 181 days between February 15, 2001, and August 15, 2001. Therefore, the accrued interest on this Treasury bond is

$$\frac{89}{181} \times \frac{5.00}{2} = 1.229282$$

And the invoice price on \$100,000 is

$$\$100,000 \times \left(96 - 23 \frac{1}{2} + 1.229282\right) / 100 = \$97,963.66$$

4.3 There are eight days between these two dates. The interest is

$$(8 * 5\%) / 360 * \$1,000,000 = \$1,111.11$$

4.4 Convex. A line connecting two points on this function will be above the function.

4.7  $e^{-.75 \times .06} = .955997.$