

## Interest Calculations Example 2a

|                      |            |
|----------------------|------------|
| Principal            | \$ 750,000 |
| Annual interest rate | 8%         |

**Date borrowed**      **October 1, 2006**

### Simple interest method

| Year | Principal  | Annual interest rate | No. of months | Interest expense |      | Cumulative interest | Principal + Cumulative interest |
|------|------------|----------------------|---------------|------------------|------|---------------------|---------------------------------|
| 2006 | \$ 750,000 | 8%                   | 3             | \$ 15,000        | (*1) | \$ 15,000           | \$ 765,000                      |
| 2007 | \$ 750,000 | 8%                   | 12            | \$ 60,000        | (*2) | \$ 75,000           | \$ 825,000                      |
| 2008 | \$ 750,000 | 8%                   | 12            | \$ 60,000        | (*2) | \$ 135,000          | \$ 885,000                      |
| 2009 | \$ 750,000 | 8%                   | 12            | \$ 60,000        | (*2) | \$ 195,000          | \$ 945,000                      |
| 2010 | \$ 750,000 | 8%                   | 12            | \$ 60,000        | (*2) | \$ 255,000          | \$ 1,005,000                    |

(\*1)                     $\$750,000 \times 8\% \times (3/12) = \$15,000$

(\*2)                     $\$750,000 \times 8\% \times (12/12) = \$60,000$

### Compound interest method

| Year | Principal  | Annual interest rate | No. of months | Interest expense |      | Cumulative interest | Principal + Cumulative interest |
|------|------------|----------------------|---------------|------------------|------|---------------------|---------------------------------|
| 2006 | \$ 750,000 | 8%                   | 3             | \$ 15,000        | (*3) | \$ 15,000           | \$ 765,000                      |
| 2007 | \$ 750,000 | 8%                   | 12            | \$ 61,200        | (*4) | \$ 76,200           | \$ 826,200                      |
| 2008 | \$ 750,000 | 8%                   | 12            | \$ 66,096        | (*5) | \$ 142,296          | \$ 892,296                      |
| 2009 | \$ 750,000 | 8%                   | 12            | \$ 71,384        | (*6) | \$ 213,680          | \$ 963,680                      |
| 2010 | \$ 750,000 | 8%                   | 12            | \$ 77,094        | (*7) | \$ 290,774          | \$ 1,040,774                    |

(\*3)                     $\$750,000 \times 8\% \times (3/12) = \$15,000$

(\*4)                     $(\$750,000 + \$15,000) \times 8\% \times (12/12) = \$61,200$

(\*5)                     $(\$750,000 + \$15,000 + \$61,200) \times 8\% \times (12/12) = \$66,096$

(\*6)                     $(\$750,000 + \$15,000 + \$61,200 + \$66,096) \times 8\% \times (12/12) = \$71,384$

(\*7)                     $(\$750,000 + \$15,000 + \$61,200 + \$66,096 + \$71,384) \times 8\% \times (12/12) = \$77,094$