

### Interest Calculations Example 1a

|                      |            |
|----------------------|------------|
| Principal            | \$ 200,000 |
| Annual interest rate | 10%        |

**Date borrowed**      **April 1, 2006**

#### Simple interest method

| Year | Principal  | Annual interest rate | No. of months | Interest expense |      | Cumulative interest | Principal + Cumulative interest |
|------|------------|----------------------|---------------|------------------|------|---------------------|---------------------------------|
| 2006 | \$ 200,000 | 10%                  | 9             | \$ 15,000        | (*1) | \$ 15,000           | \$ 215,000                      |
| 2007 | \$ 200,000 | 10%                  | 12            | \$ 20,000        | (*2) | \$ 35,000           | \$ 235,000                      |
| 2008 | \$ 200,000 | 10%                  | 12            | \$ 20,000        | (*2) | \$ 55,000           | \$ 255,000                      |
| 2009 | \$ 200,000 | 10%                  | 12            | \$ 20,000        | (*2) | \$ 75,000           | \$ 275,000                      |
| 2010 | \$ 200,000 | 10%                  | 12            | \$ 20,000        | (*2) | \$ 95,000           | \$ 295,000                      |

(\*1)                     $\$200,000 \times 10\% \times (9/12) = \$15,000$

(\*2)                     $\$200,000 \times 10\% \times (12/12) = \$20,000$

#### Compound interest method

| Year | Principal  | Annual interest rate | No. of months | Interest expense |      | Cumulative interest | Principal + Cumulative interest |
|------|------------|----------------------|---------------|------------------|------|---------------------|---------------------------------|
| 2006 | \$ 200,000 | 10%                  | 9             | \$ 15,000        | (*3) | \$ 15,000           | \$ 215,000                      |
| 2007 | \$ 200,000 | 10%                  | 12            | \$ 21,500        | (*4) | \$ 36,500           | \$ 236,500                      |
| 2008 | \$ 200,000 | 10%                  | 12            | \$ 23,650        | (*5) | \$ 60,150           | \$ 260,150                      |
| 2009 | \$ 200,000 | 10%                  | 12            | \$ 26,015        | (*6) | \$ 86,165           | \$ 286,165                      |
| 2010 | \$ 200,000 | 10%                  | 12            | \$ 28,617        | (*7) | \$ 114,782          | \$ 314,782                      |

(\*3)                     $\$200,000 \times 10\% \times (9/12) = \$15,000$

(\*4)                     $(\$200,000 + \$15,000) \times 10\% \times (12/12) = \$21,500$

(\*5)                     $(\$200,000 + \$15,000 + \$21,500) \times 10\% \times (12/12) = \$23,650$

(\*6)                     $(\$200,000 + \$15,000 + \$21,500 + \$23,650) \times 10\% \times (12/12) = \$26,015$

(\*7)                     $(\$200,000 + \$15,000 + \$21,500 + \$23,650 + 26,015) \times 10\% \times (12/12) = \$28,617$