

Interest Calculations Example 1

Principal	\$ 200,000
Annual interest rate	10%
Date borrowed	January 1, 2006

Simple interest method

Year	Principal	Annual interest rate	Interest expense		Cumulative interest	Principal + Cumulative interest
2006	\$ 200,000	10%	\$ 20,000	(*1)	\$ 20,000	\$ 220,000
2007	\$ 200,000	10%	\$ 20,000	(*1)	\$ 40,000	\$ 240,000
2008	\$ 200,000	10%	\$ 20,000	(*1)	\$ 60,000	\$ 260,000
2009	\$ 200,000	10%	\$ 20,000	(*1)	\$ 80,000	\$ 280,000
2010	\$ 200,000	10%	\$ 20,000	(*1)	\$ 100,000	\$ 300,000

(*1) $\$200,000 \times 10\% = \$20,000$

Compound interest method

Year	Principal	Annual interest rate	Interest expense		Cumulative interest	Principal + Cumulative interest
2006	\$ 200,000	10%	\$ 20,000	(*2)	\$ 20,000	\$ 220,000
2007	\$ 200,000	10%	\$ 22,000	(*3)	\$ 42,000	\$ 242,000
2008	\$ 200,000	10%	\$ 24,200	(*4)	\$ 66,200	\$ 266,200
2009	\$ 200,000	10%	\$ 26,620	(*5)	\$ 92,820	\$ 292,820
2010	\$ 200,000	10%	\$ 29,282	(*6)	\$ 122,102	\$ 322,102

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

(*3) $(\$200,000 + \$20,000) \times 10\% = \$22,000$

(*4) $(\$200,000 + \$20,000 + \$22,000) \times 10\% = \$24,200$

(*5) $(\$200,000 + \$20,000 + \$22,000 + \$24,200) \times 10\% = \$26,620$

(*6) $(\$200,000 + \$20,000 + \$22,000 + \$24,200 + \$26,620) \times 10\% = \$29,282$