

A	B	C	D	E	F	G	H	I	
2	Finance Guide with Formulated Solutions for Excel							<b>annual compounding</b>	
3	<b>FUTURE VALUE - SINGLE INVESTMENT</b>							exact interest	
4	at exact interest, compounded annually, with future value accumulated from the beginning of the period.								
5									
6	Concept: For financial planning purposes, solve the future value of a single investment. The								
7	automated date calculation is used with exact interest only.								
8									
9	This <b>formula</b> solves the future value of a single investment at exact annual interest, compounded								
10	annually. The single investment is the present value.								
11	$=(1+\text{interest rate}/100)^{(\text{days}/365)}*\text{single investment}$								
12									
13	Case Study: Find the future value of \$1,000 in 31 days at 10% exact interest, compounded annually.								
14	answer: future value							<b>\$1,008.13</b>	
15	<b>formula in cell E14</b>							$=(10/100+1)^{(31/365)}*1000$	
16									
17	Case Study: Find the future value of \$10,000 in 1,051days at 12.5% exact interest, compounded								
18	annually.								
19	answer: future value							<b>\$14,037.55</b>	
20	<b>formula in cell E19</b>							$=(12.5/100+1)^{(1051/365)}*10000$	
21									
22	<b>Computer worksheet:</b>								
23	Case Study: Find the future value of \$1,000 in 31 days at 10% exact interest, compounded annually.								
24	interest rate							10.0000 given	
25	date start							30-Jun-01 given	
26	date end							31-Jul-01 given	
27	days							31 calculated	
28	single investment							1000.00 given	
29	answer: future value							<b>\$1,008.13</b> calculated	
30	<b>formula in cell E29</b>							$=(1+E24/100)^{(E27/365)}*E28$	
31									
32	Case Study: Find the future value of \$10,000 in 1,051days at 12.5% exact interest, compounded								
33	annually.								
34	interest rate							12.5000	
35	date start							30-Mar-00 given	
36	date end							14-Feb-03 given	
37	days							1051 given	
38	single investment							10000.00 given	
39	answer: future value							<b>\$14,037.55</b> calculated	
40	<b>formula in cell E39</b>							$=(1+E34/100)^{(E37/365)}*E38$	
41									
42	Note: Exact interest is based on the actual number of days for a period less than one year. Simple								
43	annual interest is based on 30 day months and a 360 day year. The interest earned is the same								
44	for complete years with both simple annual and exact interest except with daily compounding.								
45									
46									
47									
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