

**Excel & Business Math**  
**Video/Class Project #40**  
**Partial Payment on Invoice with Cash Discount Applied**

**Topics**

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# 1) Partial Payment on Invoice with Cash Discount Applied Video Example #1, Common Sense Method

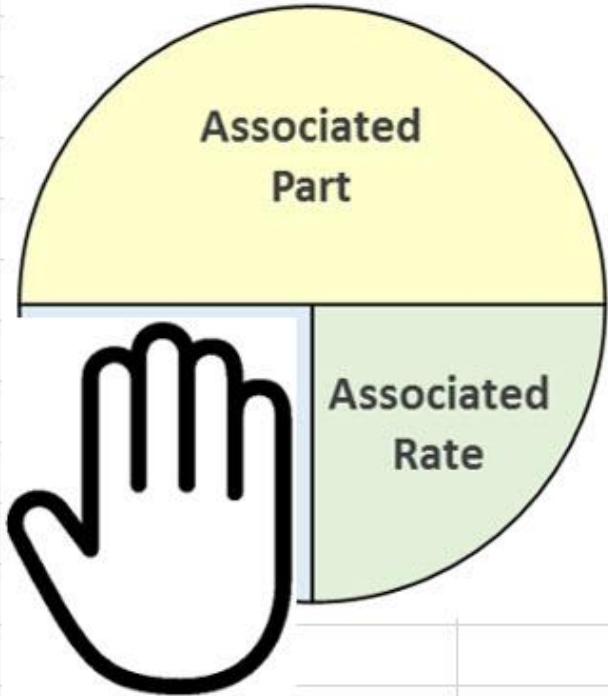
	A	B	C	D	E	F	G	H	I
1	<b>Partial Payment on Invoice with Cash Discount Applied, Example 1:</b>								
2									
3	If the Invoice Total = \$125.00 and the terms are '3/10, net 40' with an Invoice Date of 03/08/2018 and a Partial Payment of \$50.00 is made on 03/17/2018 how much should the account be credited?								
4									
5	<b>Here Are The Invoice Details (like we saw in Video #38):</b>								
6	Invoice Total			\$125.00					
7	Terms			3/10 , net 40					
8	Invoice Date			3/8/2018					
9	Invoice Pay Date			3/17/2018					
10	Partial Payment made before discount date			\$50.00					
11	Cash Discount %			0.03				Unrounded for check	
12	Number Days to Take Discount			10				51.54639175	
13	Days Between Date Paid & Invoice Date			9		=D9-D8			
14	Discount Earned? Paid in 15 or fewer days			TRUE		=D13<=D12			
15	Partial Payment =			\$51.55		=ROUND(D10/(1-D11),2)			
16	Account Balance =			\$73.45		=D6-D15			
17	Check =			50		=H12*(1-D11)			
18									
19	<b>How much should the account be credited for?</b>								
20	1) First think about how much you would have to pay if you owed \$1 and you were given a 3.00% discount.								
21	2) You would NOT have to pay the whole \$1, you would pay: \$1 - \$0.03 = \$0.97.								
22	3) This means for every \$1 in an account balance, you only need to pay \$0.97 or 97 pennies								
23	4) So if someone pays \$50.00, you cannot take just \$50.00 off the account, you must take \$1 for every \$0.97 that they pay.								
24	5) How do we do that? We ask the question: How many \$0.97 are in \$50.00!								
25	6) Dividing \$50.00 by \$0.97 tells us How many \$0.97 are in \$50.00!								
26	7) The credit for the account is: $\$50.00 / (1 - 0.03) = \$50.00 / 0.97 = \$51.55$								

2) Partial Payment on Invoice with Cash Discount Applied Video Example #1, Increase Decrease Method

Another way to think about this (from Video #23):

Begin 51.5464	Change Part	1	ROC
	End Part		Rate
	50		0.97

Term:	Formula:
Begin	End Part - Change Part
Begin	End Part/Rate
Begin	Change Part/ROC
End Part	Begin * Rate
End Part	Begin * (1 + ROC)
End Part	Begin + Change Part
Rate	End Part/Begin
Rate	1 + ROC
Change Part	End Part - Begin
Change Part	Begin * ROC
ROC	(End Part - Begin)/Begin
ROC	End Part/Begin - 1
ROC	Rate - 1



### 3) Partial Payment on Invoice with Cash Discount Applied Video Example #2, Increase Decrease Method

	A	B	C	D	E	F	G	H	I
33	<b>Partial Payment on Invoice with Cash Discount Applied, Example 2:</b>								
34									
35	Cash Discount %			0.02					
36	Invoice total			\$1,852.75					
37	Partial payment made before discount date			\$900.00		=ROUND((Partial Payment)/(1-Cash Discount %),2)			
38	Reduction in Amount Owed			\$918.37		=ROUND(D37/(1-D35),2)			
39	Amount Still Due On Account			\$934.38		=D36-D38			
40									
41	<b>Another way to think of this is: <math>\\$900/\\$0.98 =</math> "How many \$0.98 are</b>								
42	<b>there in \$900?, since for every \$0.98 I pay I get \$1 credit.</b>								