Excel Training: Financial Functions PV and PMT

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Exercises:

1. The current interest rate for loans and savings be 10% per year. Somebody promises you to pay you 1200 $ per year for 10 years. How much is this promise worth today?

Use the PV function to determine the present value.

2. Now he promises you to pay you $ 100 per month for 10 years. The interest rate remains at 10 % per year. How much is this promise worth today?

Use the PV function to determine the present value.

Are both promises worth the same? Why?

3. You want to take a loan of $ 10,000. The interest rate be 10 % per year. How much is the payment if you want to pay it back in equal, yearly payments over 10 years?

Use the PMT function to determine the payment.

4. You want to take a loan of $ 10,000. The interest rate be 10 % per year. How much is the payment if you want to pay it back in equal, monthly payments over 10 years?

Use the PMT function to determine the payment.

Solutions:
1. = PV(10%, 10, -1200)
$ 7373.48

2. = PV(10%/12, 10*12, -100)
$ 7,567.12

3. = PMT (10%, 10, 10000)
-$1,627.45 per year

4. = PMT (10%/12, 10*12, 10000)
-$132.15 per month

10 * 1627.45 = $16274.50
120 *132.15 = $15,858.09

Why do you pay more for option 3?