**Payment Function**

The payment function will calculate how much your payment would be a loan. It requires three pieces of information:

**Part 1. Interest rate per period** - $\frac{Interest rate}{Number of Payments made in one year}$

The interest rate will be displayed as a percentage in the problem and will be an annual percentage rate (APR). The bottom part is simply determining how many times in one year you would have to make a payment. Usually, we make monthly payments and that number would be 12. Here are some common payment frequencies:

|  |  |
| --- | --- |
| **Payment Frequency** | **Number of Payments per Year** |
| Monthly | 12 |
| Weekly | 52 |
| Bi-weekly (every other) | 26 |
| Daily | 365 |
| Quarterly (every 3 months) | 4 |

Example: 12% interest rate, making weekly payments. You would enter 12% / 52.

**Part 2. Total Number of Payments** - $Number of Payments per year ×Number of Years of Loan$

We will use the same number from the bottom of part 1 in this part of the equation. We will then multiply it by the number of years that we will take to pay off the loan.

Example: Monthly payments for 15 years. We would enter 12 \* 15 for this part. ( 180 total payments)

**Part 3. Amount of the Loan**

No formula for this one. You just need to make sure you are entering the amount of money that the bank is going to loan you. If you have a down payment, be sure to subtract it from the loan amount.

**PMT function Syntax**

=PMT(Part 1, Part 2, Part 3)

Don't use commas as a thousands separator for loan amount. Don't forget your percent sign.

Example: You want to buy a boat. The cost of the boat is $75,000. You will make monthly payments on the boat for 20 years. What is your monthly payment if the bank loans you the money at 9% interest?

Part 1 - interest rate / payments in a year = 9% / 12

Part 2 - Payments in a year \* number of years = 12 \* 20

Part 3 - Amount of loan - 75000

Your formula will look like:

=PMT(9%/12, 12\*20, 75000)

Open Payment Function 2 from the shared drive and complete the problems found there.