

Example 1

Cory is buying furniture worth \$2348 on credit. He can afford monthly payments of \$125 and has two credit options:

- **Option A:** The store credit card which is offering a \$50 rebate off the purchase price and an interest rate of 19.7%, compounded monthly. $C/Y = 12$
- **Option B:** A new bank credit card which has an interest rate of 21.4% compounded monthly, but no interest for the first year.

Which option would be best for Cory?

OPTION A

$$*N: 22.06 \text{ months} \downarrow$$

$$I = 19.7$$

$$PV = -(2348 - 50) = -2298$$

$$PMT = 125$$

$$FV = 0$$

$$P/Y = 12$$

$$C/Y = 12$$

TOTAL Amount paid =
Time x monthly payment

$$= 22.06 \text{ months} \times \$125$$

$$= \underline{\underline{\$2757.50}}$$

OPTION B:

First year, there's no interest months

$$\text{Total paid (first year)} = 125 \times 12$$

$$= \$1500$$

$$\text{Total owing after first year} =$$

$$= 2348 - 1500 = \$848$$

Time to repay \$848.

$$*N = 7.30 \text{ months} \leftarrow$$

$$I = 21.4$$

$$PV = 848$$

$$PMT = -125$$

$$FV = 0$$

$$P/Y = 12$$

$$C/Y = 12$$

$$\text{TOTAL Amount repaid} =$$

$$(\text{time} \times \text{monthly payments}) + 1500$$

$$(7.30 \times 125) + 1500$$

$$= \underline{\underline{\$2412.50}}$$

OPTION B is less, by $(2757.50 - 2412.50) = \$345$.

OPTION A - OPTION B