



Annuities Worksheet Multi-step Questions

# 1 Draw

Draw a time diagram. This collects the information in an easy-to-use format

Amount



# 2 Write

| (Number of payments per Year)  |  |       |   |       |   |  |
|--------------------------------|--|-------|---|-------|---|--|
| P / Y                          | =  | Р/Ү   | = | P / Y | = |  |
| (Number                        | (Number of compounding periods per Year) |       |   |       |   |  |
| C / Y                          | =  | C / Y | = | С/Ү   | = |  |
| (Total number of payments)     |  |       |   |       |   |  |
| Ν                              | =  | Ν     | = | Ν     | = |  |
| (Nominal Interest Rate)        |  |       |   |       |   |  |
| I / Y                          | =  | I / Y | = | / Y   | = |  |
| (Present value of the annuity) |  |       |   |       |   |  |
| ΡV                             | =  | ΡV    | = | ΡV    | = |  |
| (Periodic payment)             |  |       |   |       |   |  |
| ΡΜΤ                            | =  | ΡΜΤ   | = | ΡΜΤ   | = |  |
| (Future value of the annuity)  |  |       |   |       |   |  |
| FV                             | =  | FV    | = | FV    | = |  |

3 Enter And Solve



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# DIFFERENTIATING BETWEEN PV AND FV

Find PV when you see words like:

mortgage, loan, purchase of machines, pension, withdrawals.

Find FV when you see words like:

accumulation, saving for college or university, saving for retirement, savings account.

#### CALCULATING N

t = number of years;N = t x P/Y

## CALCULATING PURCHASE PRICE

Purchase price = PV + Down payment

A down payment is not PMT (periodic payment)

CONTRIBUTION

Total Contribution =  $N \times PMT$ 

TOTAL INTEREST or COST OF FINANCE

Total Interest = FV - (N x PMT) OR Total Interest = (N x PMT) - PV



| NUMBER OF DAYS BETWEEN DATES   |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
| DATE   |  |  |  |  |
| 2ND 1  |  |  |  |  |
| Enter the digits of the month, a decimal point, two digits of the date, then the two   |  |  |  |  |
| last digits of the year  |  |  |  |  |
| EXAMPLE: Enter February 3rd 2015 as the first date and May 6th 2017 as the   |  |  |  |  |
| second date  |  |  |  |  |
| DT1 2.0315 $\boxed{\text{ENTER}} \downarrow \text{DT2 5.0617} \boxed{\text{ENTER}} \downarrow \text{DBD} \boxed{\text{CPT}}$ |  |  |  |  |
|  |  |  |  |  |

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