

Age Matters

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Statement of the Problem

We all turn a year older, for each year after our birth.

How does SAS calculate this?

Statement of the Problem

SAS doesn't know how to do anything!!

It depends on the programmer.

Possible Solutions - #1

```
Date Whatever;  
  set Whichever(keep=DOB VisitDate);  
  Age = INT((VisitDate - DOB)  
    / 365);  
Run;
```

Possible Solutions - #1

Date of Birth=08/23/1952			
Year	Visit Date	VisitDate - DOB, Divide by 365	
4	08/22/1956	4	
5	08/22/1957	5	
6	08/22/1958	6	
7	08/22/1959	7	
8	08/22/1960	8	

Getting your birthday present too soon

Possible Solutions - #2

```
Data Whatever;
```

```
  set Whichever(keep=DOB VisitDate);
```

```
  Age = INT((VisitDate - DOB)  
    / 365.25);
```

```
Run;
```

Possible Solutions - #2

Date of Birth=08/23/1952			
Year	Visit Date	VisitDate - DOB, Divide by 365.25	
3	08/23/1955	2	
5	08/23/1957	4	
6	08/23/1958	5	
7	08/23/1959	6	
9	08/23/1961	8	

***Getting your birthday present too late
...big trouble!***

True Solution #1

Data Whatever;

set Whichever(keep=DOB VisitDate);

Age = YEAR(VisitDate)-YEAR(DOB)
- ((MONTH(VisitDate) < MONTH(DOB))
OR (MONTH(DOB) = MONTH(VisitDate)
AND DAY(VisitDate) < DAY(DOB)));

Run;

True Solution #2

```
Data Whatever;
```

```
    set Whichever(keep=DOB VisitDate);
```

```
    Age = %AgeCalc(DOB,VisitDate);
```

```
Run;
```

True Solution #2

The Gory Details

```
%macro AgeCalc(DOB, AsOfDate);
```

```
    floor((intck("MONTH",&DOB.,&AsOfDate.)  
        - (day(&AsOfDate.) < day(&DOB.))) / 12)
```

```
%mend;
```

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Epilogue

A great benefit of BASUG meetings is the give and take discussion that ensues after presentations. In the case of this Coders Corner, one person asked “Why not just use the YRDIF function?”

In performing some research on this function, it turns out that calculating exact age is not necessarily a straightforward practice and involves some tradeoffs.

SAS documentation (<http://support.sas.com/kb/3/036.html>) for the YRDIF function mentions “YRDIF returns unexpected results when either the beginning or ending dates specified fall within a leap year.” Another SAS note (<http://support.sas.com/kb/36/977.html>) states “This function was designed for the Securities Industry to calculate interest for fixed income securities based on industry rules.” If you use the YRDIF function for calculating age, some form of workaround may be necessary.

This SAS link (<http://support.sas.com/kb/24/567.html>) documents some code that essentially, is captured in the %AgeCalc macro presented in this document.

For more information on calculating age, you can also review

- <http://support.sas.com/kb/36/788.html> and
- <http://www.repole.com/dinosaur/age.html>

Good luck!....and Happy Birthday!