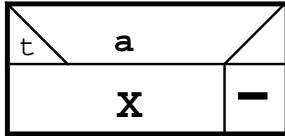
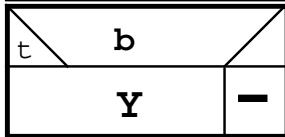


Problems on Choices: Nested ifs

In the following pieces of program, a, b are conditions (such as “age < 12” which have values true and false only), and X, Y are actions (such as output, assign, etc). For each of these pieces make a truth table describing the actions for all four possible combinations of conditions. It may be helpful to draw some diagrams. An example follows.

<pre>-- Example Code If (a) then X EndIf If (b) then Y EndIf</pre>			<table border="1" style="border-collapse: collapse;"> <thead> <tr> <th style="padding: 2px;">a</th> <th style="padding: 2px;">b</th> <th style="padding: 2px;">action</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">f</td> <td style="padding: 2px;">f</td> <td style="padding: 2px;">-</td> </tr> <tr> <td style="padding: 2px;">f</td> <td style="padding: 2px;">t</td> <td style="padding: 2px;">Y</td> </tr> <tr> <td style="padding: 2px;">t</td> <td style="padding: 2px;">f</td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;">t</td> <td style="padding: 2px;">t</td> <td style="padding: 2px;">XY</td> </tr> </tbody> </table>	a	b	action	f	f	-	f	t	Y	t	f	X	t	t	XY
a	b	action																
f	f	-																
f	t	Y																
t	f	X																
t	t	XY																

```
-- first
  If (a) then
    If (b) then
      X
    EndIf
  Else
    Y
  EndIf
```



```
-- second
  If (a) then
    If (b) then
      X
    EndIf
  Y
  EndIf
```

```
-- third
  If (a) then
    X
    If (b) then
      Y
    EndIf
  EndIf
```

```
-- fourth
  If (a) then
    X
  ElseIf (b) then
    Y
  EndIf
```