

Define/use nodes for variable in commission problem:

Variable name	Defined at node	Used at node
lprice	7	28
sprice	8	29
bprice	9	30
tlocks	10,19	19,25,28
tstocks	11,20	20,26,29
tbarrels	12,21	21,27,30
locks	14,23	15,19
stocks	18	20
barrels	18	21
lsales	28	31
ssales	29	31
bsales	30	31
sales	31	32,33,37,39,42,45
comm	35,36,37,41,42,45	36,37,42,46

Defined/Used path for commission problem:

Test case ID	Description	Variable path (Beginning, end)	DU path	Definition clear
1.	Check for lock price variable DEF(lprice,7) and USE(lprice,28)	(7,28)	<7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,15,25,26,27,28>	yes
2.	Check for stock price variable DEF(sprice,8) and USE(sprice,29)	(8,29)	<8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,15,25,26,27,28,29>	yes
3.	Check for barrel price variable DEF(bprice,9) and USE(bprice,30)	(9,30)	<9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,15,25,26,27,28,29,30>	yes
4.	Check for total locks variable DEF(tlocks,10) DEF(tlocks,19)	(10,19)	<10,11,12,13,14,15,16,17,18,19>	yes
	Three usage nodes USE(tlocks,19) USE(tlocks,25) USE(tlocks,28)	(10,25)	<10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,15,25>	no
		(10,28)	<10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,15,25,26,27,28>	no
		(19,19)	<19,19>	yes
		(19,25)	<19,20,21,22,23,24,15,25>	no
		(19,28)	<19,20,21,22,23,24,15,25,26,27,28>	no

5.	Check for total stocks variable DEF(tstocks,11) DEF(tstocks,20)	(11,20)	<11,12,13,14,15,16, 17,18,19,20>	yes
	Three usage nodes USE(tstocks,20) USE(tstocks,26) USE(tstocks,29)	(11,26)	<11,12,13,14,15,16, 17,18,19,20,21,22,2 3,24,15,25,26>	no
		(11,29)	<11,12,13,14,15,16, 17,18,19,20,21,22,2 3,24,15,25,26,27,28 ,29>	no
		(20,20)	<20,20>	yes
		(20,26)	<20,21,22,23,24,15, 25,26>	no
		(20,29)	<20,21,22,23,24,15, 25,26,27,28,29>	no
6.	Check for total barrels variable DEF(tbarrels,12) DEF(tbarrels,21)	(12,21)	<12,13,14,15,16,17, 18,19,20,21>	yes
	Three usage nodes USE(tbarrels,21) USE(tbarrels,27) USE(tbarrels,30)	(12,27)	<12,13,14,15,16,17, 18,19,20,21,22,23,2 4,15,25,26,27>	no
		(12,30)	<12,13,14,15,16,17, 18,19,20,21,22,23,2 4,15,25,26,27,28,29 ,30>	no
		(21,21)	<21,21>	yes
		(21,27)	<21,22,23,24,15,25, 26,27>	no

		(21,30)	<21,22,23,24,15,25,26,27,28,29,30>	no
7.	Check for locks variable	(14,15)	<14,15>	yes
	DEF(locks,14)			
	DEF(locks,23)	(14,19)	<14,15,16,17,18,19>	yes
	USE(locks,15)	(23,15)	<23,24,15>	yes
	USE(locks,19)	(23,19)	<23,24,15,16,17,18,19>	yes
8.	Check for stocks variable DEF(stocks,18) and USE(stocks,20)	(18,20)	<18,19,20>	yes
9.	Check for barrels variable DEF(barrels,18) and USE(barrels,21)	(18,21)	<18,19,20,21>	yes
10.	Check for lsales variable DEF(lsales,28) and USE(lsales,31)	(28,31)	<28,29,30,31>	yes
11.	Check for ssales variable DEF(ssales,29) and USE(ssales,31)	(29,31)	<29,30,31>	yes
12.	Check for bsales variable DEF(bsales,30) and USE(bsales,31)	(30,31)	<30,31>	yes
13.	Check for sales variable DEF(sales,31)	(31,32)	<31,32>	yes
		(31,33)	<31,32,33>	yes
	USE(sales,32) USE(sales,33)	(31,37)	<31,32,33,34,35,36,37>	yes

	USE(sales,37)			
	USE(sales,39)	(31,39)	<31,32,33,39>	yes
	USE(sales,42)	(31,42)	<31,32,33,39,40,41,42>	yes
	USE(sales,45)	(31,45)	<31,32,33,39,44,45>	yes
14.	Check for commission variable	((35,36,37) 46)	<35,36,37,46>	yes
	DEF(comm,35,36,37)	((41,42),46))	<41,42,46>	yes
	DEF(comm,41,42)			
	DEF(comm,45)			
	USE(comm,46)	(45,46)	<45,46>	yes