

Problem Set 1:

Exercise 2:

Apples (A), Bananas (B), Coconut (C), Strawberries (D)

	2011			2012			2013		
	Q ^p	Q ^c	P	Q ^p	Q ^c	P	Q ^p	Q ^c	P
A	100	90	0,75	100	90	0,75	125	90	1
B	25	20	1,5	25	20	1,5	30	20	1,25
C	150	150	0,5	150	150	0,75	150	150	0,75
D	-	25	0,6	-	25	0,6	-	25	1,9

nominal GDP

1.)

$$Y_{11} = 100 \cdot 0,75 + 25 \cdot 1,5 + 150 \cdot 0,5 = 187,5$$

$$Y_{12} = 100 \cdot 0,75 + 25 \cdot 1,5 + 150 \cdot 0,75 = 225$$

$$Y_{13} = 125 \cdot 1 + 30 \cdot 1,25 + 150 \cdot 0,75 = 275$$

20%

22,2%

2.) real GDP Base Year 2011

$$Y_{11} = 187,5 \rightarrow \text{same as nominal GDP (2011)}$$

$$Y_{12} = 100 \cdot 0,75 + 25 \cdot 1,5 + 150 \cdot 0,5 = 187,5$$

$$Y_{13} = 125 \cdot 0,75 + 30 \cdot 1,5 + 150 \cdot 0,5 = 213,75$$

0%

14%

Base Year 2012

$$Y_{11} = 100 \cdot 0,75 + 25 \cdot 1,5 + 150 \cdot 0,75 = 225$$

$$Y_{12} = 100 \cdot 0,75 + 25 \cdot 1,5 + 150 \cdot 0,75 = 225$$

$$Y_{13} = 125 \cdot 0,75 + 30 \cdot 1,5 + 150 \cdot 0,75 = 251,25$$

0%

11,67%

Base Year 2013

$$Y_{11} = 100 \cdot 1 + 25 \cdot 1,25 + 150 \cdot 0,75 = 243,75$$

$$Y_{12} = 100 \cdot 1 + 25 \cdot 1,25 + 150 \cdot 0,75 = 243,75$$

$$Y_{13} = 125 \cdot 1 + 30 \cdot 1,25 + 150 \cdot 0,75 = 275$$

0%

12,82%

Note: Year 11 and 12 have the same Quantities, given a base year price only the year 13 will have changes.

Chain W growth

z	B_{11}	B_{12}	B_{13}
Y_{11}	187,5	225	243,75
Y_{12}	187,5	225	243,75
Y_{13}	213,75	251,25	275

0% (between Y_{11} and Y_{12})
 0% (between Y_{12} and Y_{13})
 $11,67\%$ (between B_{11} and B_{13})
 $12,82\%$ (between B_{12} and B_{13})
 $12,25\%$ (between Y_{12} and Y_{13})

h	N. GDP	R. GDP	GDP Deflator
Y_{11}	187,5	187,5	1
Y_{12}	225	187,5	1,2
Y_{13}	275	213,75	1,286

20% (between Y_{11} and Y_{12})
 $7,2\%$ (between Y_{12} and Y_{13})

Base Year 2011