MC1

Year 1 prices

	Milk		Butter	
Year 1	500 × 2	+	2000 × 1	= 3,000
Year 2	900 × 2	+	3000 × 1	= 4,800

$$100 \times \left(\frac{Y_2}{Y_1} - 1 \right) = 100 \times \left(\frac{4800}{3000} - 1 \right)$$

B?

MC5

	Apples	Oranges
2002	$.5 (10)	$1 (5)
2004	($1) × 5	($.5) × 10

100×

2002 CPI .5 × 10 + 1 × 5 = (10)/10

2004 CPI 1 × 10 + .5 × 5 = 12.50/10

$$100 \times \frac{12.50}{10} = (125) \quad D$$

MC 14

Cobb Douglas CRS

$\tilde{k} = \frac{K}{N}$ $\quad \frac{Y}{N} = \left(\frac{K}{N}\right)^{\frac{2}{3}}$

$\frac{k^*}{N} = \left(\frac{s}{\delta}\right)^{\frac{1}{1-\alpha}}$

$s = .2$

$\delta = .1$

$\alpha = \frac{2}{3}$

$\frac{1}{1-\alpha} = 3$

$= \left(\frac{.2}{.1}\right)^3 = \frac{.2}{.1} \times \frac{.2}{.1} \times \frac{.2}{.1}$

$2^3 = 8$

k^* is LR eqm / steady-state capital/worker

$\frac{1}{1 - \frac{2}{3}} = \frac{1}{\frac{3}{3} - \frac{2}{3}} = \frac{1}{\frac{1}{3}}$

$= 3$

MC 16

$\alpha = \frac{1}{2}$

$\frac{1}{1-\alpha} = 2$

$\frac{K}{N} = \left(\frac{.4}{.1}\right)^2 = 16$

$\frac{Y}{N} = \frac{C}{N} + \frac{I}{N}$

$\frac{I}{N} = S\frac{Y}{N} = s\frac{K}{N}$

$\frac{I}{N} = \frac{s}{s}\frac{k}{N} = \frac{.1}{.4} \times 16 = 4$

$\frac{I}{N} = \delta\frac{K}{N} = .1 \times 16 = 1.6$

$\frac{C}{N} = \frac{Y}{N} - \frac{I}{N} = 4 - 1.6 = 2.4$

B!

MC 18

$(\delta + g_A + g_N)^K = .1 + .02 + .03$

$= .15^k$ E!

MC 11

$$\frac{\Delta K_{t+1}}{N} = \frac{I_t}{N} - \delta \frac{K_t}{N}$$

A!

MC12 ~~B~~ ~~D~~ C!

$$\frac{I_t}{N} = \frac{S_t}{N}$$

MC13

$$0 = \frac{I^*}{N} - \delta \frac{K^*}{N}$$

$$\rightarrow \frac{I^*}{N} = \delta \frac{K^*}{N}$$

$$\rightarrow s \frac{Y^*}{N} = \delta \frac{K^*}{N}$$

$$y = \frac{Y^*}{N}$$

$$\frac{S}{N} = \frac{I}{N}$$

$$S = sY$$

$$\rightarrow \frac{I}{N} = \frac{sY}{N}$$

$y \equiv \frac{Y^{\pi}}{N}$

$k \equiv \frac{K^{\pi}}{N} \rightarrow sy = \delta k$

$\rightarrow y = \frac{\delta}{s} k$ C/

MC 14 Cobb-Douglas CRS

$$\frac{Y}{N} = \left(\frac{k}{N}\right)^{\frac{2}{3}} \rightarrow \alpha = \frac{2}{3}$$

$s = .2$

$\delta = .1$

$$\frac{k}{N} = \left(\frac{.2}{.1}\right)^{\frac{1}{1-\frac{2}{3}}}$$

$$\frac{1}{1-\frac{2}{3}} = \frac{1}{\frac{3}{3}-\frac{2}{3}} = \frac{1}{\frac{1}{3}} = 3$$

$$\frac{k}{N} = 2^3 = 8 \quad E!$$