

Quiz 5 — Romer's (1986) model

Questions	Answers
1. What does the first welfare theorem say?	☐ If there are no externalities, markets are perfectly competitive, markets are “complete”, and the number of types of agent is finite. ☐ If there are no externalities, markets are perfectly competitive, supply and demand are non-zero on every market, and the number of types of agent is finite. ☐ If there are no externalities, markets satisfy i) atomicity, ii) product homogeneity, iii) transparency, iv) free entry and exit, v) free mobility of the factors of production, supply and demand are non-zero on every market, and the number of types of agent is finite. ☐ Then the optimal policy is laissez-faire. ☐ Then the competitive equilibrium is a Pareto optimum.
2. Why does this theorem not apply in Romer's (1986) model?	☐ Because taxes distort consumer behavior. ☐ Because technical progress is endogenous. ☐ Because there is an externality. ☐ Because $A_t = K_t/L_t$.
3. What are the social returns to capital in Romer's (1986) model?	☐ They are the rise in output caused by an equivalent rise in the firm's capital stock. ☐ They are the rise in output caused by a smaller rise in the firm's capital stock. ☐ They are the rise in productivity caused by an equivalent rise in a firm's capital stock. ☐ They are the rise in productivity caused by a larger rise in a firm's capital stock.
4. Is the wage endogenous to a firm's decisions in Romer (1986)?	☐ Yes. ☐ No. ☐ The question is meaningless.

Questions	Answers
5. The benevolent planner's problem differs from the problems solved so far because:	☐ The planner allocates efficiently between surplus and profits. ☐ Agents interact on markets. ☐ The planner maximizes the objectives of every agent in the model, subject to the economy's resource constraint. ☐ The planner internalizes the externalities, whereas agents solving their own problems separately do not internalize the cost they impose on the other agents of the model.
6. Why did we not study the benevolent planner's problem in the CKR model?	☐ Because agents optimized better than they do in Romer (1986). ☐ Because agents internalized their externality through g. ☐ Because the second welfare theorem applied. ☐ None of the above.