## Partner assignments

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#### **Problems**

#### • Romer's Problem 2.16.

- This problem has very important policy implications; it should be at the core of any discussion of Social Security reform.
- New part (c): (i) Explain the economic intuition behind your results for (a) and (b), especially the welfare effects. (ii) Public-policy analysts in the United States and many other countries are very concerned about the effects of the aging of the large baby-boom generation on Social Security. Briefly discuss how these issues might be analyzed in the Diamond model. (You don't have to do the full analysis.) What results would you expect based on your answers to parts (a) and (b)?
- *Hint:* The introduction of Social Security taxes and benefits fundamentally changes the individual's budget constraint, so results like Romer's (2.53) and (2.55) will have to be derived again under the new conditions.

### • Romer's Problem 3.3.

• Additional task: For each part, sketch the time paths of  $g_A$ ,  $g_K$ , and  $\ln Y$  from the time of the change.

### • Romer's Problem 3.4.

• Add new part (d): Is this a "convergent" model or is there endogenous growth in this model? How is your answer to this question connected with the answers to (b) and (c)?

## • Romer's Problem 3.5.

- Addition to part (c): Sketch the time path of  $g_K$ ,  $g_A$ ,  $g_Y$ , and  $\ln Y$  in response to an increase in the saving rate.
- Omit the last part of (d): I don't find a compelling intuition here, so you don't need to either.

# • Romer's Problem 3.13.