



(https://accounts.coursera.org/i/zendesk/courserahelp?return_to=https://learner.coursera.help/hc)



Congratulations!

You have completed Week 2.

Start Week 3

(</learn/approximation-algorithms-part-2/home/week/3>)

Steiner Forest and Primal-Dual Approximation Algorithms



Claire Mathieu

This module uses linear programming duality to design an algorithm for another basic problem, the Steiner

Problem definition



Slides

(</learn/approximation-algorithms-part-2/supplement/iTpFG/slides>)



Practice Quiz: Quiz

1 3 questions

(</learn/approximation-algorithms-part-2/quiz/iDyRB/quiz-1>)



Problem definition 3 min

(</learn/approximation-algorithms-part-2/lecture/mN2ri/problem-definition>)

Help Center

A special case: Steiner tree



Slides

(/learn/approximation-algorithms-part-2/supplement/mnP88/slides)



Practice Quiz: Quiz

2 2 questions

(/learn/approximation-algorithms-part-2/quiz/oTHI0/quiz-2)



A special case: Steiner tree 12 min

(/learn/approximation-algorithms-part-2/lecture/ya9SR/a-special-case-steiner-tree)

A LP relaxation for Steiner forest...



Slides

(/learn/approximation-algorithms-part-2/supplement/p8Fmp/slides)



Practice Quiz: Quiz

3 2 questions

(/learn/approximation-algorithms-part-2/quiz/KW6n1/quiz-3)



LP relaxation for Steiner forest 6 min

(/learn/approximation-algorithms-part-2/lecture/8JQRP/lp-relaxation-for-steiner-forest)

...and its dual



Slides

(/learn/approximation-algorithms-part-2/supplement/NII1x/slides)

**Practice Quiz: Quiz**

4 2 questions

(/learn/approximation-algorithms-part-2/quiz/6hLsE/quiz-4)



... and its dual 5 min

(/learn/approximation-algorithms-part-2/lecture/YBdel/and-its-dual)

Primal-dual algorithm, Part 1



Slides

(/learn/approximation-algorithms-part-2/supplement/JSgb/slides)

**Practice Quiz: Quiz**

5 2 questions

(/learn/approximation-algorithms-part-2/quiz/fLjpE/quiz-5)

Primal-dual algorithm,
Part1 11 min

(/learn/approximation-algorithms-part-2/lecture/2CuQt/primal-dual-algorithm-part1)

Primal-dual algorithm, Part 2



Slides

(/learn/approximation-algorithms-part-2/supplement/2equH/slides)

**Practice Quiz: Quiz**

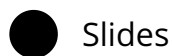
6 3 questions

(/learn/approximation-algorithms-part-2/quiz/m1Kzz/quiz-6)

Primal-dual algorithm, Part
2 13 min

(/learn/approximation-algorithms-part-2/lecture/2rl8r/primal-dual-algorithm-part-2)

Analysis



Slides

(/learn/approximation-algorithms-part-2/supplement/DmUi2/slides)



Practice Quiz: Quiz

7 2 questions

(/learn/approximation-algorithms-part-2/quiz/PLRsY/quiz-7)



Analysis 14 min

(/learn/approximation-algorithms-part-2/lecture/IFUQo/analysis)

Proof of the main lemma



Slides

(/learn/approximation-algorithms-part-2/supplement/J7Cmz/slides)



Practice Quiz: Quiz

8 3 questions

(/learn/approximation-algorithms-part-2/quiz/QbudA/quiz-8)



Proof of the main lemma 9 min

(/learn/approximation-algorithms-part-2/lecture/QNUNS/proof-of-the-main-lemma)

Exercises



Slides-all

(/learn/approximation-algorithms-part-2/supplement/TNIPu/slides-all)

Assignment: Assignment



2 30 min

(/learn/approximation-algorithms-part-2/peer/tyX7r/assignment-2)