

## Where's an ambulance when you need one?

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When you call an ambulance in an emergency, you would like that ambulance to respond as rapidly as possible. The City of Ithaca would like to try out a new strategy where ambulances are positioned around the city for optimal readiness. Your task is to tell Bangs Ambulance Inc.,<sup>1</sup> where they should park up their ambulances at any given time.

**A)** The main target is for the response time to be reduced to less than 6 minutes within the City of Ithaca. You will need to tell Bangs how many ambulances it needs to achieve this and where to position them at all times. Note that some areas within the City of Ithaca may be difficult to reach within 6 minutes, and Bangs is willing to slightly increase the worst-case response time for a significantly higher utility of its vehicles.

**B)** In addition to your technical manuscript, write an executive summary to explain the benefits of your new strategy to Bangs Ambulance Inc. If an area of the city has a response time of more than 6 minutes, then please fully justify why you are not achieving it.

Some relevant things to possibly consider:

- The driving time to various areas, as well as the expected number of calls to an area, differs throughout the day and throughout the week. Friday nights and weekends are often higher volume time periods.
- Once an ambulance is called out, it will be busy until it either deals directly with the emergency or returns from dropping off the patient to a hospital.
- Ambulances cannot park up anywhere in the street due to parking restrictions.



Here are a few links on information about the ambulance services in Ithaca:

[Here's an article from ithaca.com with some information](#)

[Tompkins county EMS task force report, 2017](#)

[Tompkins County EMS task force website, with links to various documents](#)

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<sup>1</sup> Please avoid directly contacting Bangs Ambulance Inc., Cornell EMS, or Cayuga medical center for information. They are emergency medical services and we do not want to divert their attention.