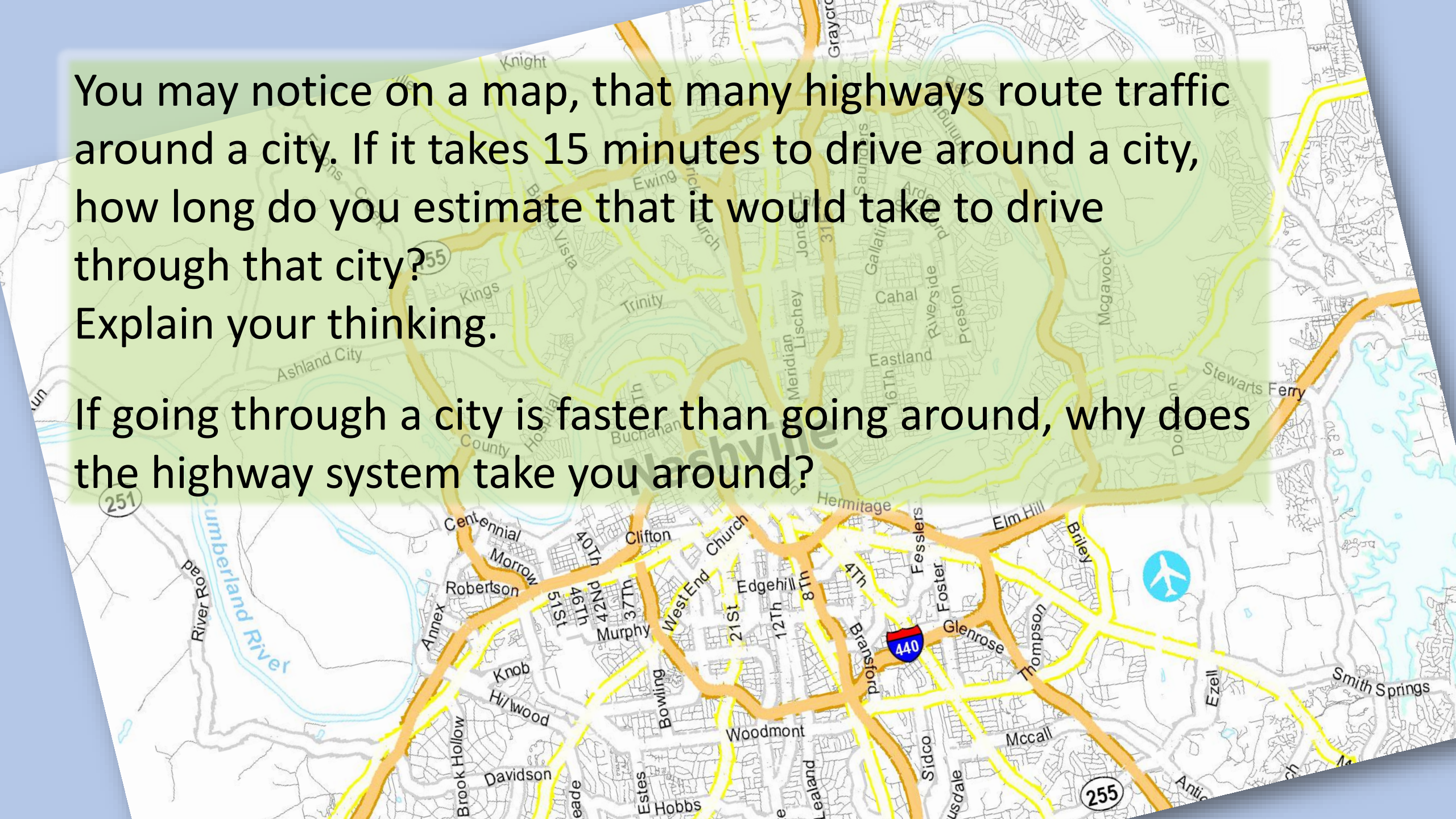
You may notice on a map, that many highways route traffic around a city. If it takes 15 minutes to drive around a city, how long do you estimate that it would take to drive through that city?
Explain your thinking.

If going through a city is faster than going around, why does the highway system take you around?



You may notice on a map, that many highways route traffic around a city. If it takes 15 minutes to drive around a city, how long do you estimate that it would take to drive through that city? Explain your thinking.

Going around a city is similar to going around half the circumference of the circular route. Going around the full circle would take 30 minutes, Divide that by 3 ($\pi$ estimate) because $C=\pi d$. That gives you 10 minutes for a good estimate.

If going through a city is faster than going around, why does the highway system take you around?

In theory, it is faster to go around. In practice on/off ramps and local business traffic can cause congestion that make it longer to go through the city.