Dangerous Fumes

Task Card

Task: Highway A, which runs North/South, intersects Highway B, heading North-East at a 30 degree angle. Highway C, which runs East/West, intersects Highway A 20 miles South of the intersection of Highway A and B.

A truck crashes on Highway A halfway between Highway B and C, releasing hazardous fumes. Given the weather conditions, the fumes travel away from the crash site in all directions at 2.4 miles per hour.

Many people are on all three roads. Who is in trouble after 5 minutes? Who is in trouble after 15 minutes? Who is in trouble at any given time? Be specific.