

Risks for Flying

Data Type	Details	Value	Source
Input	Distance from Chicago to Milwaukee (in miles)	71	Given
Input	% deaths per mile flown	2.00E-11	Given
Input	% Accidents while take off and landing	0.9	Given
Assumption	Average Take off distance = Average Runway Length (in miles)	2	<a href="https://www.stantec.com/en/ideas/topic/mobility/how-long-is-an-airport-s-runway#:~:text=Between%20these%20two%20runway%20extremes,13%2C000%20feet%20(3%2C962%20meters).">https://www.stantec.com/en/ideas/topic/mobility/how-long-is-an-airport-s-runway#:~:text=Between%20these%20two%20runway%20extremes,13%2C000%20feet%20(3%2C962%20meters).</a>
Assumption	Average Landing distance = Average Runway Length (in miles)	2	<a href="https://www.stantec.com/en/ideas/topic/mobility/how-long-is-an-airport-s-runway#:~:text=Between%20these%20two%20runway%20extremes,13%2C000%20feet%20(3%2C962%20meters).">https://www.stantec.com/en/ideas/topic/mobility/how-long-is-an-airport-s-runway#:~:text=Between%20these%20two%20runway%20extremes,13%2C000%20feet%20(3%2C962%20meters).</a>
Assumption	chance of Death in Accidents	1	Can change also if needed
Calculation	Average Distance in Air	67	
	Average Distance on Land	4	
	Risk of death while in air	1.34E-10	Accidents
	Risk of death while in land	0.00E+00	Accidents
	<b>Total Risk Rate</b>	2.06E-10	

Risk for Driving

Data Type	Details	Value	Source
Input	Distance from Chicago to Milwaukee ( in miles)	71	Given
Input	Annual auto traffic deaths in US	40,100	Given
Input	Risk of being in a fatal car crash while sober and wearing a seatl	0.20	Given
Assumption	Annual number of drivers in US	233,000,000	<a href="https://www.statista.com/statistics/191653/number-of-licensed-drivers-in-the-us-since-1988/#:~:text=Around%20233%20million%20people%20held,the%20United%20States%20in%202021.">https://www.statista.com/statistics/191653/number-of-licensed-drivers-in-the-us-since-1988/#:~:text=Around%20233%20million%20people%20held,the%20United%20States%20in%202021.</a>
Assumption	Average driving miles per driver in US	14263	<a href="https://www.thezebra.com/resources/driving/average-miles-driven-per-year/#:~:text=On%20average%2C%20Americans%20drive%2014%2C263,to%20the%20Federal%20Highway%20Administration.">https://www.thezebra.com/resources/driving/average-miles-driven-per-year/#:~:text=On%20average%2C%20Americans%20drive%2014%2C263,to%20the%20Federal%20Highway%20Administration.</a>
Calculation	Annual miles driven by all motorists	3.32E+12	Annual number of drivers in US*Average driving miles per driver in US
	number of auto traffic death per mile in US	1.21E-08	Annual auto traffic deaths in US/Annual miles driven by all motorists
	Adjusted number of auto traffic death per mile in US (safer drivin	2.41E-09	number of auto traffic death per mile in US* Risk rate with sober and safe driving
	<b>Total Risk Rate</b>	1.71E-07	Distance from Chicago to Milwaukee ( in miles) * Adjusted number of auto traffic death per mile in US (safer driving)

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