

'Reasoning from Evidence'

Traffic Accidents - Example #4

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The aims of this assessment are to provide the opportunity for you to:

- use appropriate graphs and/or diagrams to analyze data
- reason clearly and convincingly.

In this task, you are a Road Safety Advisor for Smallville.

Your task is to produce some suggestions about how road safety in Smallville might be improved.

To help you, below you have a map of Smallville and a database of traffic accidents that took place during the last year. These figures show the time and place of the accident, details of the victim and the type of vehicle that caused the accident. (Times are given as decimals, to make graphing easier).

Your task is to:

1. Find the trouble spots in the town.
2. Try to decide *why* they are trouble spots.
3. You have \$100,000 to spend on improving road safety.

What recommendations do you have?

Here are some things that could be done with costs.

Educational campaign in the schools	\$4,000
Publicity campaign in the town	\$10,000
Changing speed limit signs	\$4,000
Pedestrian crossing	\$16,000
Traffic Lights	\$40,000
Footbridge	\$90,000

Accident Data Sheet

No.	Map	Time	Day	Month	Casualty	Age	Person	Vehicle
1	D3	08.75	Tues	January	pedal cyclist	12	boy	car
2	H4	09.25	Sat	January	pedestrian	65	woman	m/cycle
3	I9	17.9	Thurs	January	pedestrian	14	girl	bus
4	L7	12.17	Sun	January	pedestrian	44	man	car
5	I5	15.75	Sat	February	pedal cyclist	16	boy	car
6	K4	12.50	Tues	February	pedestrian	7	girl	car
7	H6	20.50	Thurs	February	passenger	28	man	lorry
8	B6	23.17	Sat	February	passenger	54	man	car
9	J3	19.00	Tues	March	pedal cyclist	16	boy	car
10	K5	12.75	Thurs	March	pedestrian	7	boy	car
11	I5	16.00	Wed	March	driver	56	man	bus
12	F4	23.00	Tues	March	pedal cyclist	38	woman	car
13	K7	16.00	Sun	March	pedestrian	24	woman	car
14	I4	14.58	Fri	March	pedestrian	55	woman	bus
15	I8	16.50	Wed	April	pedestrian	14	boy	car
16	G6	23.00	Sat	April	pedestrian	62	man	m/cycle
17	M1	10.75	Mon	April	passenger	12	boy	car
18	K4	12.25	Tues	April	pedestrian	8	girl	car
19	D3	12.50	Fri	May	pedestrian	14	girl	bus
20	A2	18.50	Sat	May	pedal cyclist	22	woman	car
21	D4	08.00	Sat	May	pedestrian	45	man	car
22	L7	16.75	Sun	June	pedestrian	39	woman	car
23	B2	17.17	Wed	June	driver	58	man	car
24	H6	14.00	Tues	June	pedestrian	72	man	bus
25	J4	20.50	Mon	July	pedal cyclist	18	man	bus
26	F4	12.75	Thur	July	pedestrian	16	boy	car

No.	Map	Time	Day	Month	Casualty	Age	Person	Vehicle
27	B6	07.75	Fri	July	passenger	23	woman	car
28	H4	15.75	Sat	July	pedestrian	62	woman	car
29	G6	06.83	Mon	August	passenger	15	boy	bus
30	M9	23.83	Sat	August	motorcycle rider	18	boy	lorry
31	K6	10.00	Sun	August	pedestrian	45	man	car
32	E6	12.50	Sat	September	pedestrian	12	girl	lorry
33	K4	12.25	Wed	September	pedestrian	7	boy	car
34	I5	23.75	Sat	September	pedestrian	46	man	car
35	F4	12.83	Mon	October	passenger	3	girl	lorry
36	L9	18.00	Fri	October	motorcyle rider	19	man	tractor
37	K4	12.75	Wed	October	pedestrian	8	girl	bus
38	D6	13.75	Sat	October	pedal cyclist	13	girl	car
39	F7	22.00	Fri	November	motorcyle rider	19	girl	car
40	J7	15.50	Sat	November	pedestrian	61	man	car
41	H1	12.00	Tues	November	motorcycle rider	21	man	tractor
42	G5	21.21	Sat	November	passenger	38	man	car
43	K5	16.00	Wed	November	pedestrian	9	boy	car
44	K5	16.00	Wed	November	pedestrian	8	boy	car
45	B2	21.75	Sat	November	passenger	23	man	car
46	J4	21.75	Wed	November	pedestrian	23	woman	bus
47	B2	23.75	Sun	December	motorcycle rider	28	man	car
48	H9	13.83	Tues	December	pedestrian	45	woman	bus
49	K7	17.00	Sun	December	pedestrian	52	man	car
50	J5	18.00	Fri	December	passenger	45	woman	bus
51	B2	17.17	Mon	December	passenger	23	man	car
52	B2	17.17	Mon	December	driver	24	man	car
53	A6	23.83	Sat	December	passenger	34	woman	m/cycle
54	K5	12.75	Wed	December	pedestrian	6	girl	car
55	E9	10.75	Sat	December	pedal cyclist	12	boy	bus
56	B2	17.08	Fri	December	driver	48	woman	m/cycle
57	B2	17.08	Fri	December	motorcycle rider	17	boy	car
58	K4	12.25	Wed	December	pedestrian	7	boy	car

Map of the Neighborhood

