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4. A new supermarket opens with its entrance on a busy road.

In the 4 years before the supermarket opened there were 10 traffic accidents on the road. In the 12 months after opening there were 6 traffic accidents on the road.

The supermarket manager claims that there has been no change in the rate of traffic accidents on the road since the supermarket opened.

(a) Test the manager's claim at the 5% level of significance. State your hypotheses clearly.

(5)

A local resident claims that the rate of traffic accidents on the road has increased.

(b) Explain how a hypothesis test, with a 5% level of significance, to assess the resident's claim would be different from your hypothesis test in part (a). State the conclusion you would reach.

(3)

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