

Fault Finding and Fixing' Interpreting and Misinterpreting Data Tasks - Set #3

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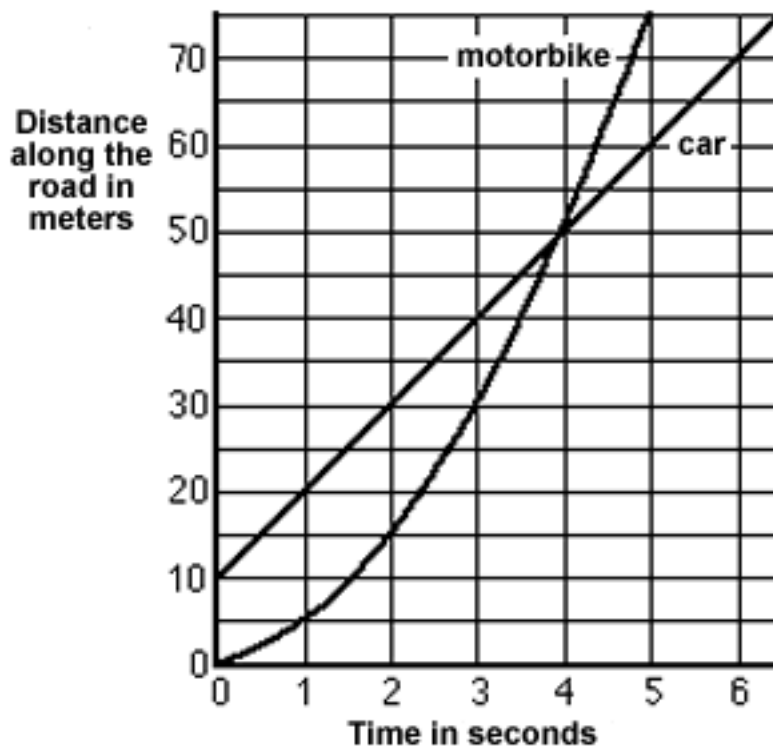
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Each question contains a selection of errors or misleading interpretations of data.

The aim of this assessment is to provide the opportunity for you to:

- explain clearly the source of each error or misinterpretation.
- rectify the errors and produce correct interpretations.

1. Along a country road

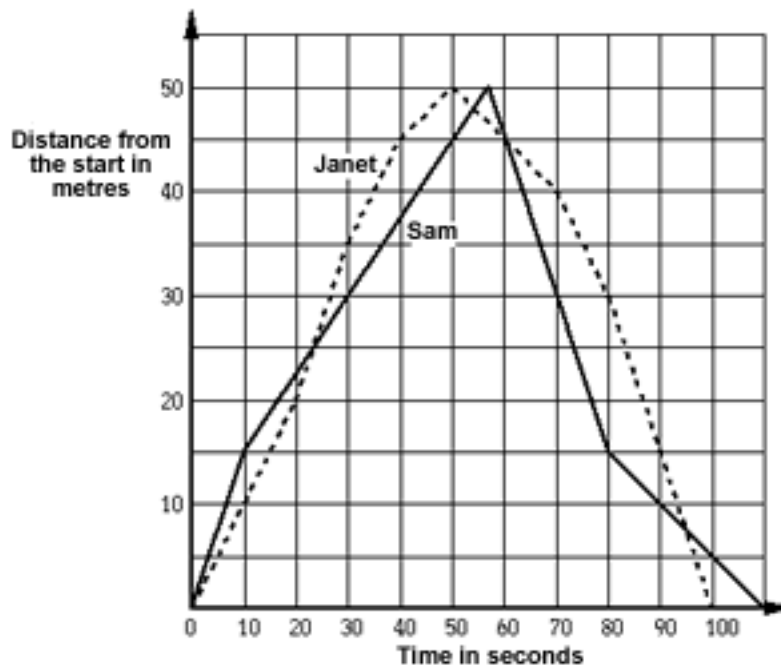


This graph shows a car and a motorbike travelling along a country road.

What is wrong with the following statement?

I think that they are travelling at the same speed after 4 seconds. You can tell that because the graphs cross.

2. Swimming pool



The graph above shows the progress of a swimming race.

Here is a commentary of the race.

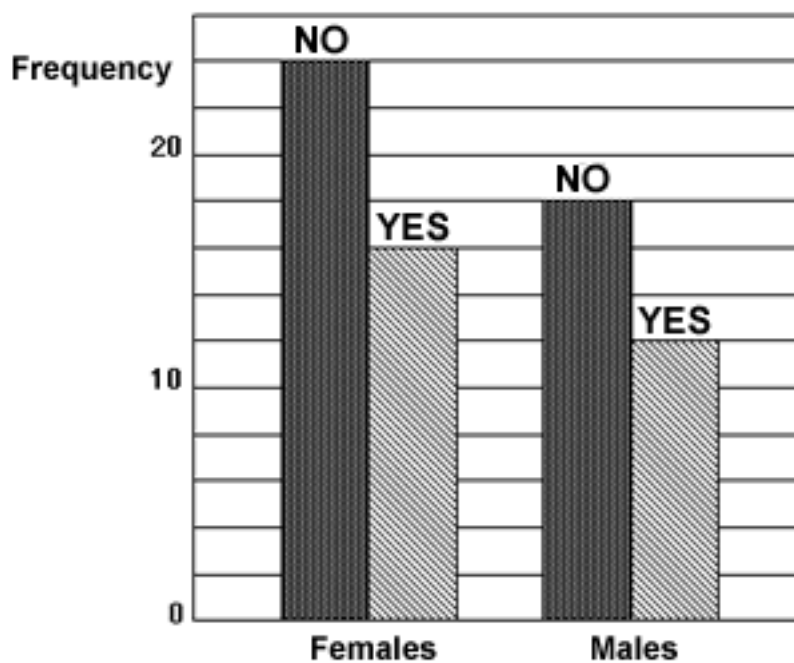
Highlight the mistakes in this commentary and write a better one.

- Sam goes quickly into the lead.
- He is swimming at 15 metres per second.
- Janet is swimming at only 10 metres per second.
- After 22 seconds, Janet overtakes Sam.
- Janet swims more quickly than Sam from 25 seconds until she turns at 50 seconds.
- Sam overtakes Janet after 55 seconds, but she catches up again.
- 5 seconds later, Janet is in the lead until right near the end.
- Sam swims at a steady 30 metres per second after the turn, until 80 seconds, while Janet is gradually slowing down.
- Sam wins by 10 seconds.

Explain clearly how you know that an error has been made.

Show how the error should be put right.

3. College magazine



Karl is thinking of producing a college magazine.

He produces a prototype of the magazine and conducts a small survey to compare male and female opinions of it. He asks the following question among a random sample of students:

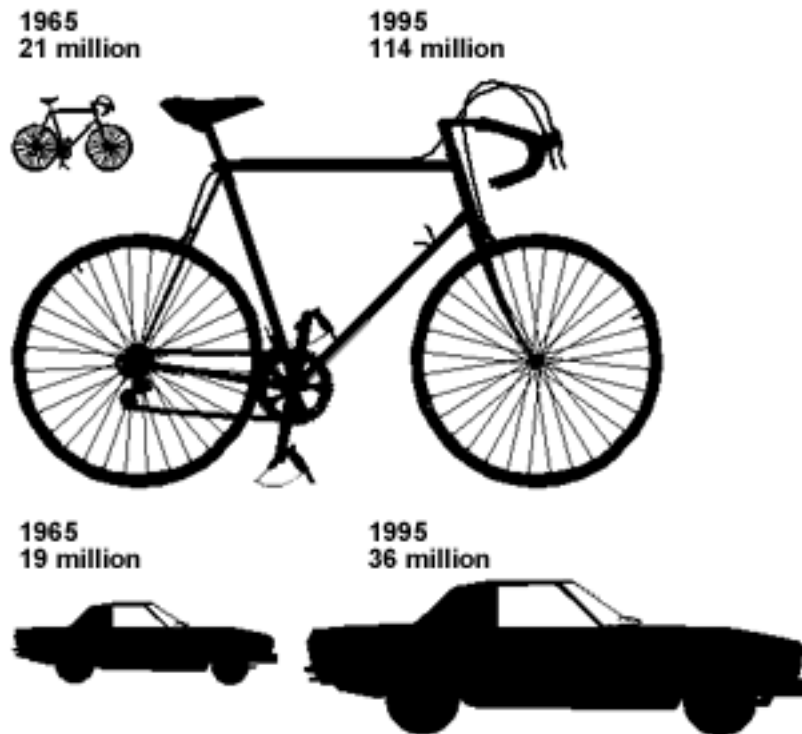
Would you pay a dollar for this magazine?

The results are shown below.

He concludes that females are less likely to buy the magazine than males.

Explain why Karl is wrong and say what a sensible conclusion would be.

4. Car and Bicycle Production



The diagram below shows how the world production of cars and bicycles has changed from 1965 to 1995.

Explain, with reasons, whether or not you think that this diagram fairly represents the numerical information given