WJEC 2014 Online Exam Review

GCSE Mathematics Unit 1 4351-02

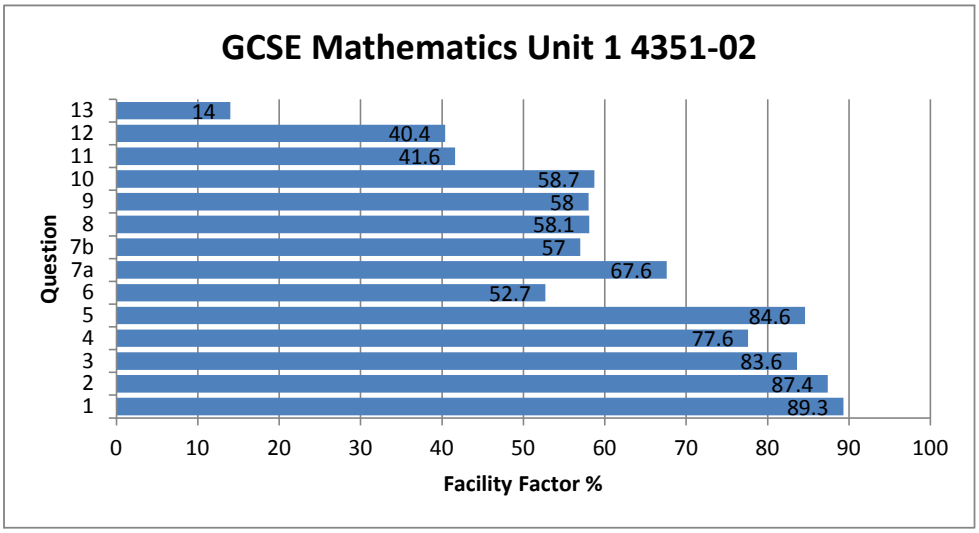
All Candidates' performance across questions

Question Title	N	Mean	S D	Max Mark	F F	Attempt %
1	920	2.7	0.5	3	89.3	100
2	906	2.6	0.8	3	87.4	98.5
3	920	7.5	2.1	9	83.6	100
4	918	3.9	1.9	5	77.6	99.8
5	913	1.7	0.6	2	84.6	99.2
6	914	3.7	1.8	7	52.7	99.3
7a	892	2	1.2	3	67.6	97
7b	908	1.1	0.8	2	57	98.7
8	913	2.3	1.5	4	58.1	99.2
9	908	4.6	2.6	8	58	98.7
10	898	1.8	1.2	3	58.7	97.6
11	891	1.7	1.7	4	41.6	96.8
12	853	2.4	2.5	6	40.4	92.7
13	820	0.8	1.5	6	14	89.1

6a

7b

10



Examiner only

6. *(a)* A company was set up with 500 workers.
At the end of each of the first three years the company employed more workers.
The number of additional workers employed each year was equal to two-fifths of the number of workers that were there at the start of that year.

How many people worked for the company in the fourth year? [4]

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How many people worked for the company in the fourth year? [4]

end of 1st year = 500 + $\frac{2}{5}$ of 500

= 700

end of second year = 700 + $\frac{2}{5}$ of 700

= 980

end of third year = 980 + $\frac{2}{5}$ of 980

= 1372

end of 4th year = 1372 + $\frac{2}{5}$ of 1372 = 1920 workers.

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200 × 3 = 600 total new workers

In the fourth year 1100 people

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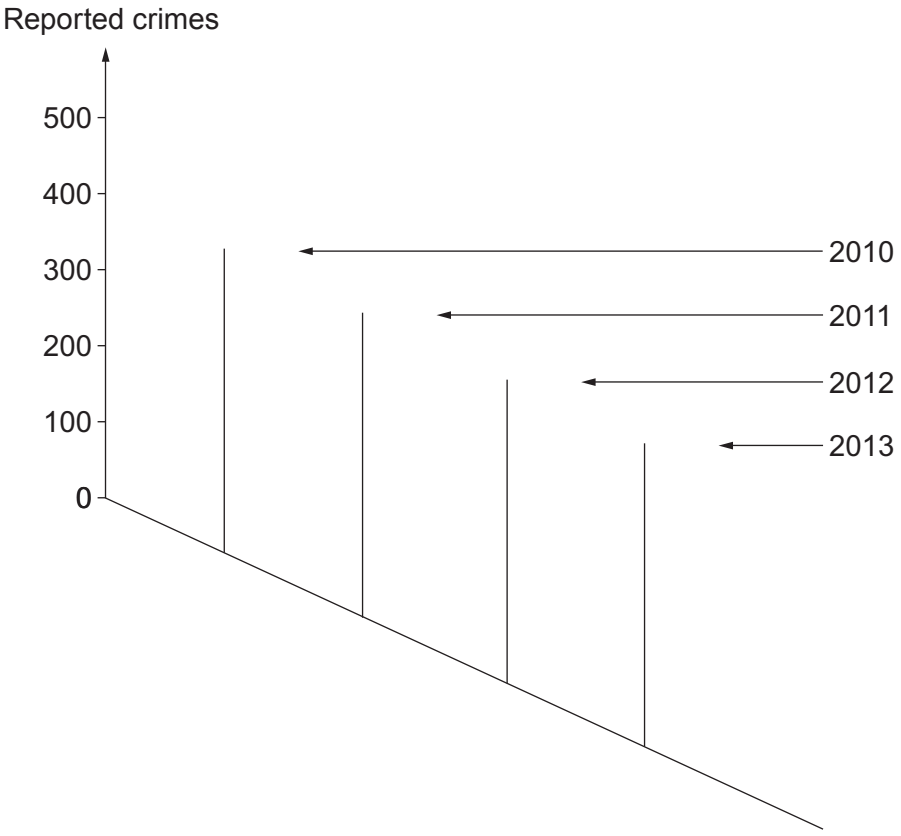
Examiner only

(b) A newspaper published the following graph.



Comment on how this graph could be misunderstood and give the reason for this. [2]

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Examiner only

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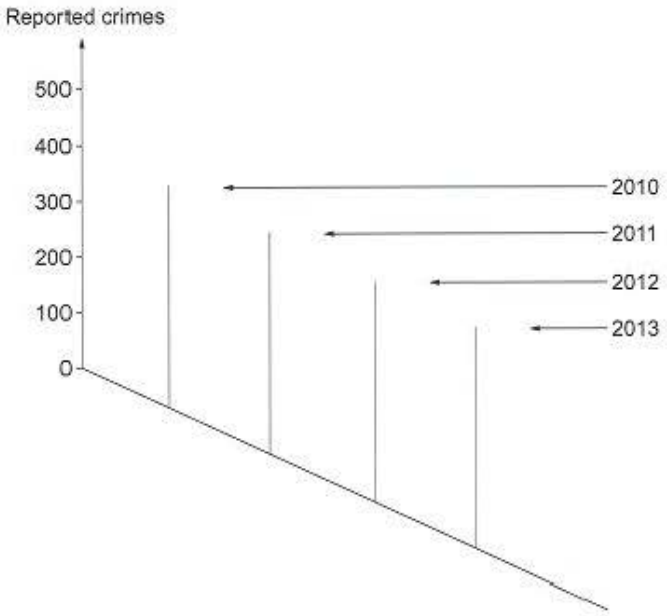

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The x and y lines should be at 90°.

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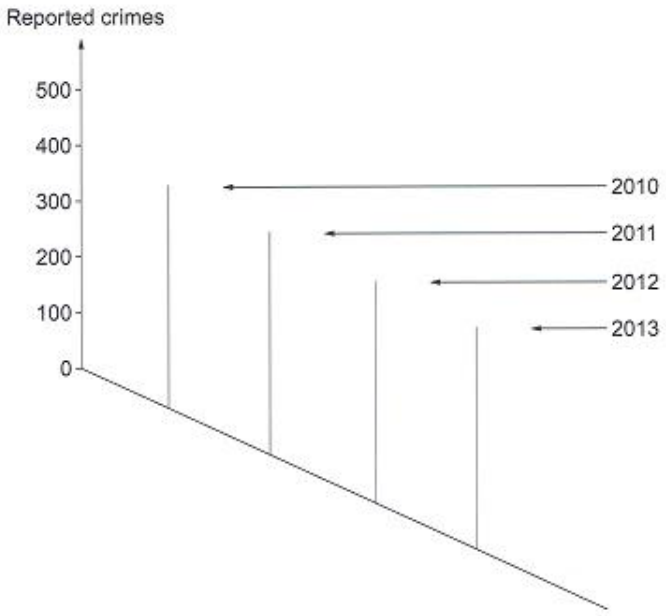

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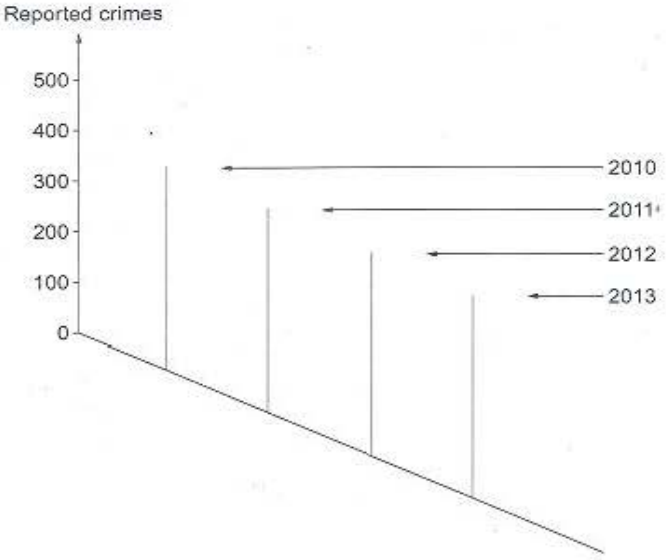

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People could think that the crime decreases from the years 2010 to 2013 because the x axis is slanted and not horizontal.

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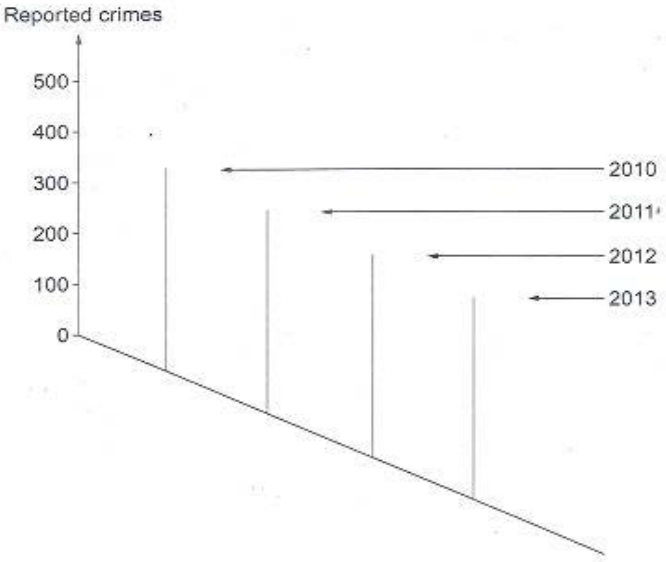

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Examiner only

10. A building society is advertising the following savings scheme.

SUPER SAVER

Interest rate: 6% per annum
Interest is paid to you every 4 months

The building society must tell customers what the Annual Equivalent Rate (AER) is on this savings scheme.
The formula used to calculate this AER is

$$\text{AER} = \left[\left(1+\frac{R}{100N}\right)^{N} - 1\right] \times 100$$

Where R is the percentage interest rate per annum shown in the advert,
and N is the number of interest payments you receive in one year.

Calculate the AER on this Super Saver scheme.
Give your answer correct to 2 decimal places. [3]

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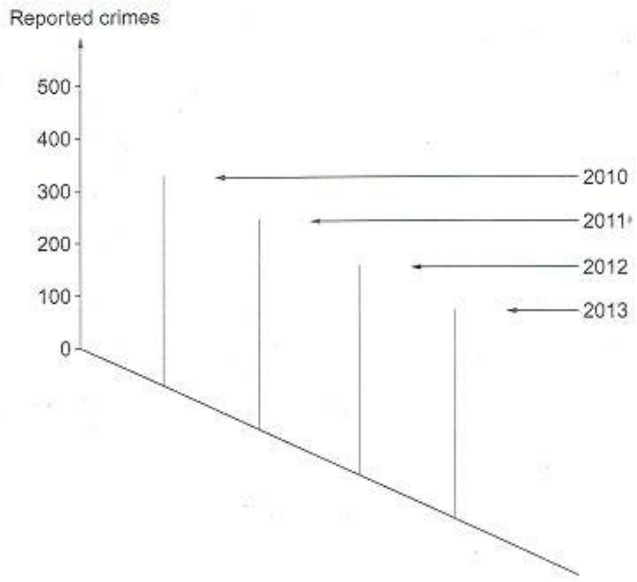

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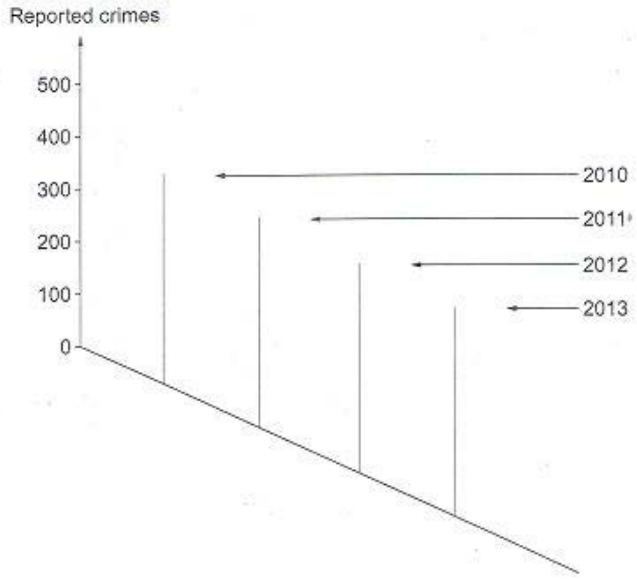

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