

- b The mean age of male teachers is 45.2 and the mean age of female teachers is 38.1 showing that male teachers are, on average, 7 years older than the female teachers.
- c The male frequency polygon is to the right of the female frequency polygon.

12 a

	Under £30 000	At least £30 000	Total
Men	60	30	90
Women	60	50	110
Total	120	80	200

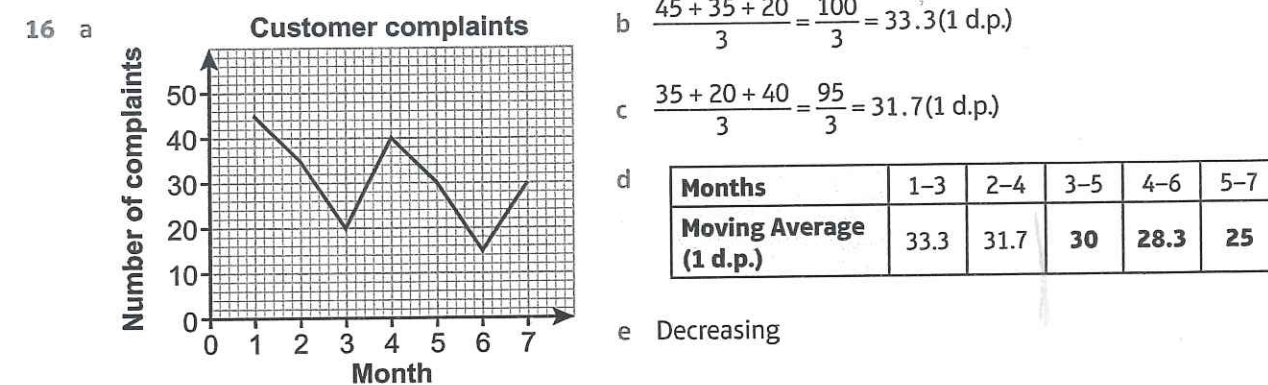
- b 55% c 66.7% (1 d.p.) d 62.5%

13

	Music	Drama	Sport	Total
Boys	35	21	39	95
Girls	30	28	32	90
Total	65	49	71	185

- 14 a i 50% ii 23% b 29.6% (1 d.p.)

- 15 Pie chart, because the other options cannot be used to display qualitative data.



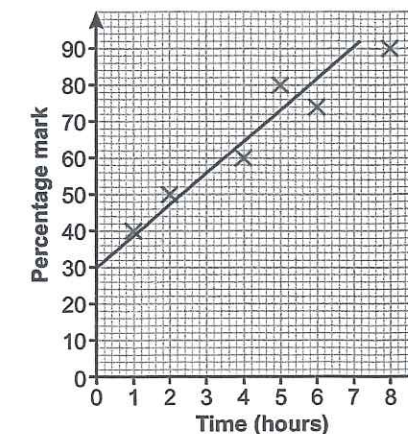
- 17 a 29, 35, **36**, **38** b The trend is for an increase in prices.

- 18 $x = 15$

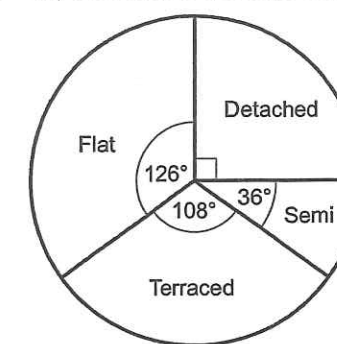
3 Unit test

- 1 He needs a total mark of 279 over 3 papers [1]
He already has a total of 178 over the first 2 papers [1]
So he would need 101% on the last paper which is impossible [1]
- 2 a 7.1% [1] b Q4 in 2012 [1] c falling [1]
- 3 a 12 [1] b 38 [1] c 39 [1]
- 4 a multiplying midpoints by frequencies [1] total $\sum fx$ (336 mins) [1] mean = 4.2 mins [1]
b $2 \leq t < 4$ [1] c The estimated mean will decrease, the median class will stay the same [2]

- 5 a [1] for labelling both axes correctly [1] for correctly plotting at least 2 points [1] if all points are correctly plotted.



- b Positive correlation [1]; the more revision time the higher the exam mark [1]
- c (shown on the graph) a sensible line of best fit with 2 or 3 points plotted above/below the line [1], 55% – or for correctly reading off their line [1]
- d No, this value is outside the known data points [1]
- 6 a Frequency polygons can only be drawn when the data is numerical [1]
b any reasonable attempt at pie chart [1] correct angle of at one least sector [1] all four correct angles [1]



- c It depends how many properties are sold in total: impossible to tell without this information [1]
- 7 a 2-way table with correct column and row headings [1] entering the given numbers (100, 53, 12, 15, 20, 40) in the correct locations [1] completely correct table [1]

	16GB	32GB	64GB	Total
Men	12	15	20	47
Women	12	21	20	53
Total	24	36	40	100

- b $\frac{9}{25}$ o.e. [1]
- 8 a 130 [1] b 30 [1] c $30 \leq t < 40$ [1]

Sample student answer

- a Student A has got the answer correct.
- b Student B gets more marks, because they have shown correct working and only got the final calculation wrong. Student A has shown no working so gets no method marks.