**& FREQUENCY POLYGONS**

**EXPRESSIONS**

**averages, range**

**EXPRESSIONS**

**grouped data**

**EXPRESSIONS**

**C**

**Pythagroas**

**GRADE BUSTER**

*Your ‘5 a day’ mathematical workout*

1. The table contains the maths results for Class A:

a) Write down the modal class.

b) Write down the group containing the median.

c) Find the range of results.

|  |  |
| --- | --- |
| Exam percentage | Frequency |
| 0 ≤ x < 20 | 5 |
| 20 ≤ x < 40 | 9 |
| 40 ≤ x < 60 | 12 |
| 60 ≤ x < 80 | 15 |
| 80 ≤ x < 100 | 8 |

2. The table contains the maths results for Class B:

|  |  |  |
| --- | --- | --- |
| Exam percentage | Frequency |  |
| 0 ≤ x < 20 | 2 |  |
| 20 ≤ x < 40 | 15 |  |
| 40 ≤ x < 60 | 8 |  |
| 60 ≤ x < 80 | 5 |  |
| 80 ≤ x < 100 | 8 |  |

Calculate an estimate for the mean (to 1dp)

3. Find 3 different sets of grouped data with (minimum 4 groups) with modal class ‘5≤ x ≤ 10’ and median group ‘10 ≤ x ≤ 15’.

4. i) Explain what is wrong with the following solution:

|  |  |  |  |
| --- | --- | --- | --- |
| *Number* | *Frequency* | *Midpoint* |  |
| *5 ≤ x < 10* | *5* | *7.5* | *37.5* |
| *10 ≤ x < 15* | *4* | *12.5* | *50* |
| *15 ≤ x < 20* | *5* | *17.5* | *87.5* |
| *20 ≤ x < 25* | *8* | *22.5* | *180* |

*355*

*Mean = 355 = 88.75*

*4*

Calculate an estimate for the mean (to 1dp).

|  |  |  |
| --- | --- | --- |
| Number of sweets | Frequency |  |
| 5 ≤ x < 10 | 5 |  |
| 10 ≤ x < 15 | 4 |  |
| 15 ≤ x < 20 | 5 |  |
| 20 ≤ x < 25 | 8 |  |

ii) Find the correct solution

5) a) Using the same axes, draw frequency polygons for Class A and Class B in Questions 1 and 2.

b) Compare the distributions.

|  |  |  |  |
| --- | --- | --- | --- |
| Qu |  | ☺ | ☹ |
| 1a & 3 | I can find the modal class |  |  |
| 2b & 3 | I can find the median for grouped data |  |  |
| 1c | I can find the range for grouped data |  |  |
| 2 & 4 | I can estimate the mean for grouped data |  |  |
| 5a | I can construct frequency polygons |  |  |
| 5b | I can use frequency polygons to compare distributions |  |  |

|  |
| --- |
| Top tips I must remember for the exam: |
| ☺  ☺  ☺ |
| Types of questions I need to practise more: |
| ☺  ☺  ☺ |