

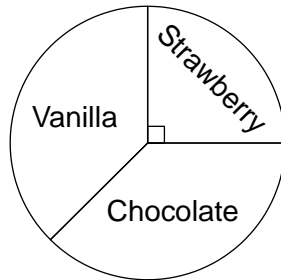
Statistics (Intermediate UKMT)

These questions must be attempted ***without a calculator***

Topics covered in the questions below may not necessarily be from the topic of the title.

1. An ice cream stall sells vanilla, strawberry and chocolate ice creams. The pie chart illustrates the sales of ice cream for last Saturday. The number of vanilla and the number of chocolate ice creams sold were the same. The stall sold 60 strawberry ice creams.

How many chocolate ice creams were sold?



- A 90 B 99 C 100 D 120 E 135

2. A tourist attraction, which opens every day, needs 30 000 visitors per day on average to break even. Last week there were 120 000 visitors.

What is the number of visitors needed this week to break even over the two-week period?

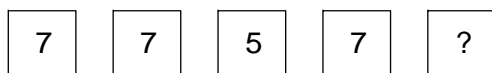
- A 43 000 B 90 000 C 180 000 D 210 000 E 300 000

3. What fraction is half-way between $\frac{1}{4}$ and $\frac{1}{6}$?

- A $\frac{1}{10}$ B $\frac{2}{9}$ C $\frac{5}{24}$ D $\frac{3}{14}$ E $\frac{7}{12}$

4. The mean, median and mode of the numbers in the boxes below are the same.

What is the missing number?



- A 6.5 B 7 C 8 D 8.5 E 9

5. On four tests, each marked out of 100, my average was 85.

What is the lowest mark I could have scored on any one test?

- A 0 B 40 C 60 D 81 E 85

6. The average (mean) weight of five giant dates was 50g. Kate ate one and the average (mean) weight of the four remaining dates was 40g.

What was the weight of the date that Kate ate?

- A 10 g B 50 g C 60 g D 90 g E more information is needed

7. What is the mean of $1.\dot{2}$ and $2.\dot{1}$?

- A $1.\dot{6}$ B 1.666 C 1.665 D $1.6\dot{5}$ E 1.65

8. The mean of three numbers, x , y and z is x . What is the mean of y and z ?

- A $\frac{1}{2}x$ B x C $2x$ D $3x$ E $4x$

9. What is the mean of $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{6}$?

- A $\frac{1}{5}$ B $\frac{1}{15}$ C $\frac{5}{12}$ D $\frac{7}{24}$ E $\frac{5}{16}$

10. The mean of a sequence of 64 numbers is 64. The mean of the first 36 numbers is 36.

What is the mean of the last 28 numbers?

- A 28 B 44 C 72 D 100 E 108