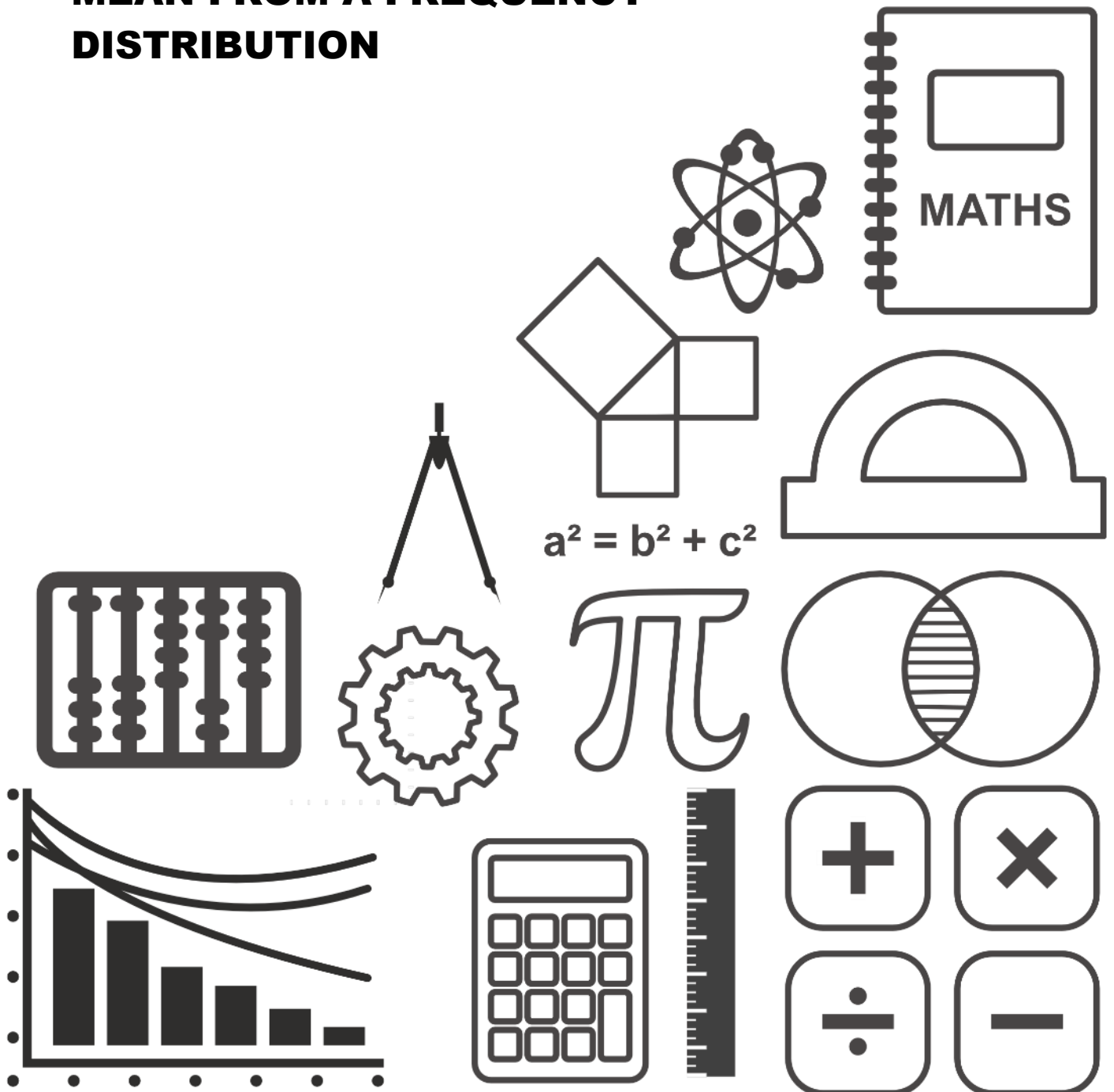


MATHSDIY

GCSE TOPIC BOOKLET MEAN FROM A FREQUENCY DISTRIBUTION



1. In a particular street of 50 houses, a survey of the number of pets in each house was carried out. The following frequency distribution was obtained.

Number of pets per house	Number of houses
0	15
1	13
2	10
3	8
4	2
5	2

Calculate the mean number of pets per house.

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2. The duration, in minutes, of each of 150 phone calls was recorded. The table shows a grouped frequency distribution of the results.

Duration of phone call in minutes (t)	Number of phone calls
$0 < t \leq 5$	36
$5 < t \leq 10$	58
$10 < t \leq 15$	26
$15 < t \leq 20$	18
$20 < t \leq 25$	10
$25 < t \leq 30$	2

Find an estimate for the mean duration of a phone call.

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3. The heights of 107 Christmas trees were measured to the nearest centimetre. The table below shows a grouped frequency distribution of the heights.

Height (h centimetres)	Number of Christmas trees
$191 \leq h \leq 197$	24
$198 \leq h \leq 204$	35
$205 \leq h \leq 211$	28
$212 \leq h \leq 218$	20

Find an estimate for the mean height of the Christmas trees.

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4. The times taken, by customer service advisers, to answer 50 phone calls were recorded to the nearest second. The table shows a grouped frequency distribution of this information.

Time, t (seconds)	Number of phone calls
$1 \leq t \leq 5$	12
$6 \leq t \leq 10$	30
$11 \leq t \leq 15$	8

Find an estimate for the mean time taken to answer these phone calls.

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5. The heights of 80 people were measured to the nearest centimetre. The table below shows a grouped frequency distribution of the heights.

Height (h centimetres)	Number of people
$151 \leq h \leq 157$	18
$158 \leq h \leq 164$	37
$165 \leq h \leq 171$	25

Find an estimate for the mean height of these people.

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6. The number of days taken to germinate 60 seeds was recorded. The table shows a grouped frequency distribution of this information.

Time, d days	Number of seeds
$1 \leq d \leq 7$	15
$8 \leq d \leq 14$	33
$15 \leq d \leq 21$	12

Find an estimate for the mean time taken for a seed to germinate.

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7.

In Summerfield, the rainfall for each of 30 days was measured. The results are summarised in the table below.

Daily rainfall, r , in cm	Number of days
$0.5 \leq r < 1.5$	5
$1.5 \leq r < 2.5$	11
$2.5 \leq r < 3.5$	13
$3.5 \leq r < 4.5$	1

Calculate an estimate for the mean daily rainfall for the 30 days.

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