

BASIC MATHEMATICS

MATH 0101

SIMPLE AVERAGE

Averages

- called the arithmetic mean,
- by sharing the sum of the quantities concerned equally between the numbers of quantities.
- **RULE:** *add up* the data provided and *divide by* the number of quantities.

- ⦿ Eg:
- ⦿ Find the average age of five young people attending an adventure playground on a particular morning, who are aged 6, 8, 11, 12 and 13 respectively.

TRY!

1. Find the average of each of the following sets of data:
 - a) 3, 5, 9, 12, 16
 - b) 4, 6, 7, 10, 13
 - c) 425, 387, 296, 512
 - d) 259, 412, 736
 - e) 7, 11, 13, 17

2. Find the average of each of the following sets of data:
 - a) 14 kg, 13 kg, 70kg, 51 kg
 - b) 29 kg, 37 kg, 55 kg, 24 kg, 30 kg
 - c) 17 hr 30 min, 16 hr 40 min, 15 hr 20 min, 22 hr 10 min
 - d) 5 hr 50 min, 8 hr 40 min, 7 hr 25 min, 6 hr 30 min, 5 hr 10 min
 - e) 27.5 tones, 32.3 tones, 18.7 tones, 19.1 tomes

Weighted Averages

- An average in which each quantity to be averaged is **assigned a weight**.
- These weightings determine the **relative importance of each quantity** on the average.
- Eg:
2 candidates receive 70 marks in an examination and the third 49 marks. What was the average mark?



Try!

1. Find the average weight of the following sets of parcels:
 - a) 2 parcels weighing 400 g each and 3 parcels weighing 100 g each
 - b) 4 parcels weighing $\frac{1}{2}$ kg each, 2 parcels weighing 300 g each and one parcel of 200 g.
 - c) 3 packets weighing 120 g each and 2 packets weighing 70 g each
 - d) 2 crates weighing 62.5 kg and 4 crates weighing 55.25 kg (answer to the nearest kilogram)
 - e) 4 crates weighing 5.2 kg and 6 crates weighing 3.6 kg

Try!

1. In an examination taken by 20 students 3 score 72%, 2 score 69%, 1 scores 68%, 5 score 62%, 4 score 58%, 2 score 48%, and the others get 46%, 41% and 33% respectively. What is the average mark?
2. A racing driver does 12 practice laps. 3 are timed at 9 min 14 s, 2 at 9 min 17 s, 2 at 9 min 12.5 s and the rest as follows: 9 min 22 s, 9 min 21.4 s, 9 min 14.8 s, 9 min 12.8 and 9 min 33 s. What was his average time? Answer correct to the nearest tenth of a second?
3. A firm makes up wage packets as follows: 7 men get £85.50 each, 3 men get £82.50, 14 men get £76.80 and 6 get £65.00. Work out the average wage correct to the nearest penny.