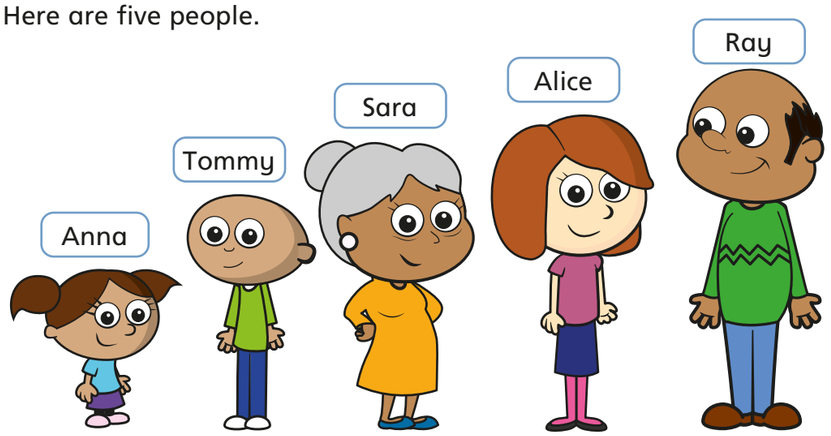
Find and interpret the range

1 Here are five people.



a) The table shows the height of each person.

Name	Anna	Tommy	Sara	Alice	Ray
Height	82 cm	120 cm	148 cm	162 cm	185 cm

What is the range of the heights?

Show your workings.

103 cm

b) The table shows the age of each person.

Name	Anna	Tommy	Sara	Alice	Ray
Age	2 years	6 years	78 years	38 years	37 years

What is the range of the ages?

Show your workings.

76 years

2 What are the ranges of the sets of data?

a) 11 m 20 m 32 m 29 m

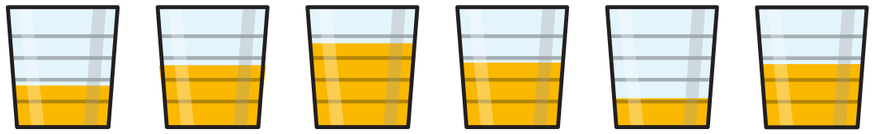
21 m

b) 135 g 117 g 215 g 72 g 250 g

178 g

3 Nijah pours some glasses of juice.

The amount of juice in each glass is shown underneath.

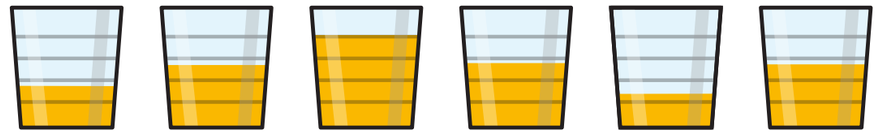


A	B	C	D	E	F
140 ml	230 ml	330 ml	250 ml	100 ml	210 ml

a) What is the range of the amounts of juice?

230ml

b) Nijah pours 20 ml of juice each into glass C and glass E.



A B C D E F

Explain why the range does not change.

C and E contain the greatest and least quantities already, adding 20 ml to these doesn't change that and the difference stays the same.

c) Nijah now pours 20 ml of juice each into glasses A, B, D and F.



A B C D E F

Explain what happens to the range.

Nothing. The greatest and least quantities remain unchanged and so the range remains unchanged.

d) Finally, Nijah pours 30 ml of juice into one of the glasses.

The range increases by 30 ml.

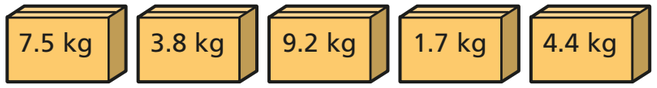
Which glass did she pour the juice into? C

Did you get the same answer as your partner?

© White Rose Maths 2020

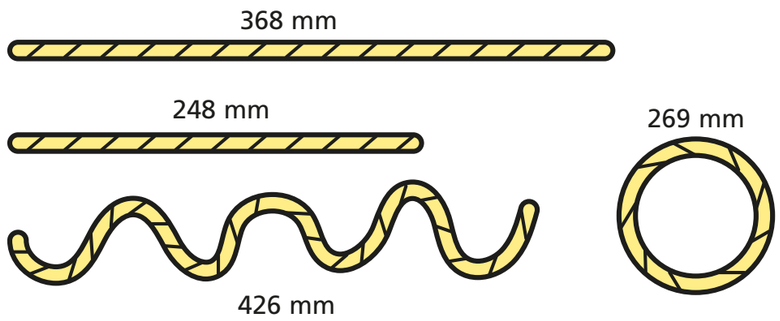
4 **a)** What is the range of the parcel masses?

7·5 kg



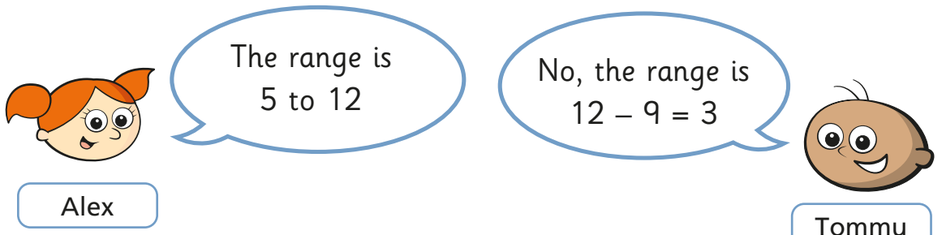
b) What is the range of the lengths of string?

178mm



5 Here are the shoe sizes of seven children in Filip's class.

12	8	7	5	11	7	9



a) Explain to a partner the mistake that each of them has made.

b) Work out the range of the shoe sizes.

7

6 Find the range of the masses.

6 kg	1,200 g	750 g

5·25kg

7 The range of some numbers is 25

The smallest number is 31

What is the greatest number?

56

8 Seven people take part in a fishing competition.

Here is some information about the number of fish they catch and the total mass.

Person	A	B	C	D	E	F	G
Number of fish caught	11	15	7	12	12	18	9
Total mass of fish caught	95 kg	120 kg	85 kg	115 kg	170 kg	165 kg	80 kg

a) Work out the range of the number of fish caught.

11

b) Work out the range of the total masses.

90kg

9 Here are five number cards.

3	7	8		

The range of all five cards is 12

a) What could the values of the two missing cards be?

e.g. 1 , 13

b) What could the values of the two cards be if one of them is a negative number?

Compare answers with a partner.

e.g. −1 , 11

© White Rose Maths 2020