

## 12.02.21 – Problem Solving

### First Problem

# Fifteen Cards

Age 7 to 11  
Challenge Level ★

I have fifteen cards numbered 1 – 15.

I put down seven of them on the table in a row.



The numbers on the first two cards add to 15.

The numbers on the second and third cards add to 20.

The numbers on the third and fourth cards add to 23.

The numbers on the fourth and fifth cards add to 16.

The numbers on the fifth and sixth cards add to 18.

The numbers on the sixth and seventh cards add to 21.

What are my cards?

Can you find any other solutions?

How do you know you've found *all* the different solutions?

### Second Problem

# Finding Fifteen

Age 7 to 11  
Challenge Level ★★

Tim had nine cards, each with a different number from 1 to 9 on it.

He put the cards into three piles so that the total in each pile was 15.

How could he have done this?

Can you find *all* the different ways Tim could have done this?

You may like to print off and cut out [these digit cards](#) to help you.