Age 11+ Level ★
Worksheet 1 – Solutions

1. **Would You Like a Jelly Baby?**
   He must take 13 jelly babies
   nrich.maths.org/10105/solution

2. **Strange Dice**
   There are 14 different possible totals:
   2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 16 and 18.

   10 is the most likely sum
   nrich.maths.org/13695/solution

3. **Satnav Dilemma**
   There are 18 different routes
   nrich.maths.org/2411/solution

4. **Birthday Party**
   The largest number of pupils who could share a birthday is 6
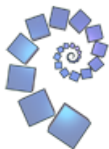   nrich.maths.org/4999/solution

5. **Half and Half**
   It can be done in 6 ways

   nrich.maths.org/11670/solution

These problems are adapted from UKMT (ukmt.org.uk) and WMC (competition.ac) problems.

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Worksheet 1 – Solutions

1. **Monkey Puzzle**
   The probability is $\dfrac{2}{6} = \dfrac{1}{3}$

   nrich.maths.org/9434/solution

2. **Clubs**
   7 students belong to both clubs
   nrich.maths.org/13684/solution

3. **School Dinners**
   I will have eaten 30 meals before I repeat the initial combination
   nrich.maths.org/6223/solution

4. **Pieces of Eight**
   The probability is $\dfrac{5}{7}$

   nrich.maths.org/10144/solution

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Age 11+ Level ★★★
Worksheet 1 – Solutions

1. **Rain**
   5 days had no rain
   nrich.maths.org/13643/solution

2. **Almost Constant Digits**
   There are 64 numbers
   nrich.maths.org/7140/solution

3. **Perfect Score**
   At least 30 children answered all the questions correctly
   nrich.maths.org/12628/solution

4. **Nine or Ten?**
   A total score of 10 is more likely
   nrich.maths.org/639/solution

5. **Counting Socks**
   She must take 7 socks to be sure to have a pair without holes
   nrich.maths.org/12623/solution