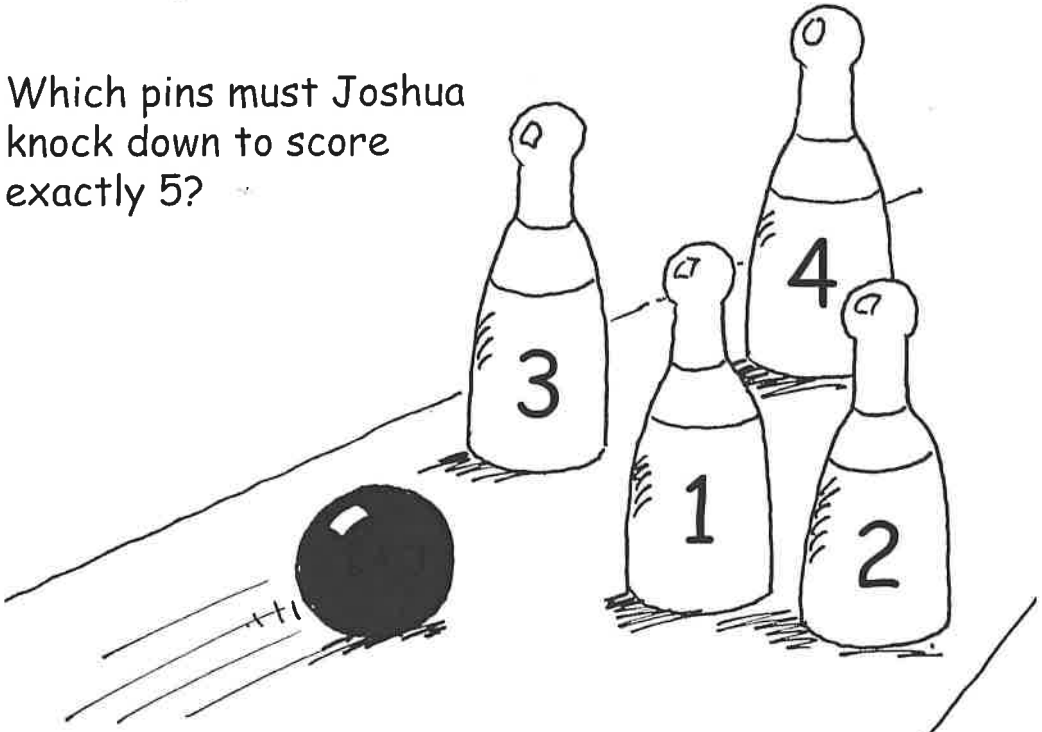
Puzzles and problems for Years 1 and 2

Four-pin bowling

Which pins must Joshua knock down to score exactly 5?



Find 2 different ways:

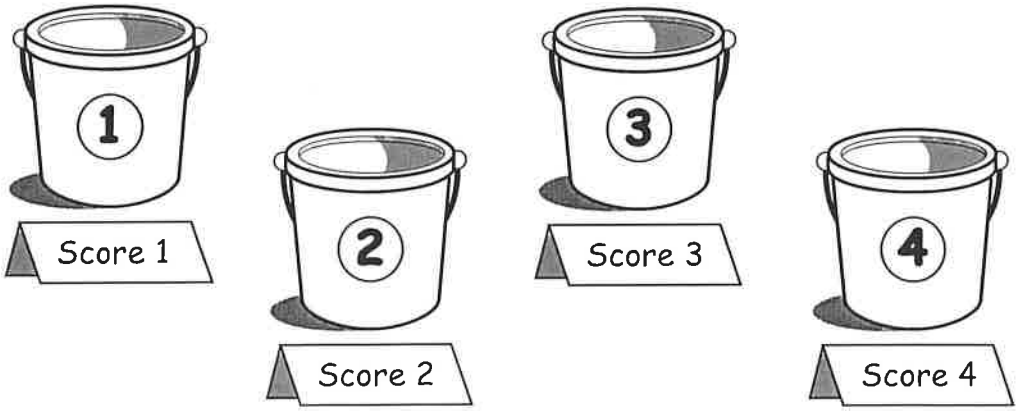
a. to score 5

b. to score 6

c. to score 7

Bean-bag buckets

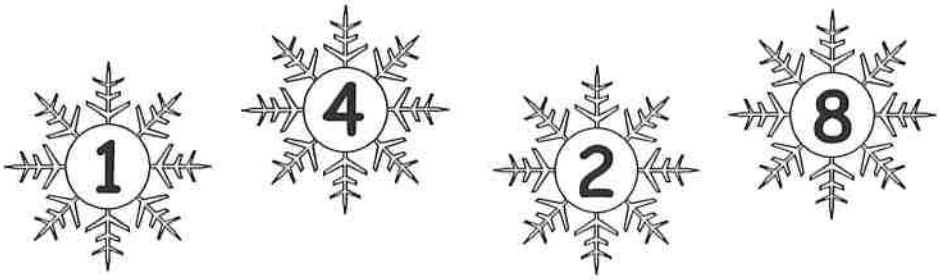
Dan threw 3 bean-bags.
Each bag went in a bucket.
More than one bag can go in a bucket.



1. What is the highest score Dan can get?
2. Find three ways to score 6.
3. Find three ways to score 9.
4. What other scores can Dan get?

Pick a pair

Choose from these numbers.



1. Pick a pair of numbers.
   Add them together.
   Write the numbers and the answer.

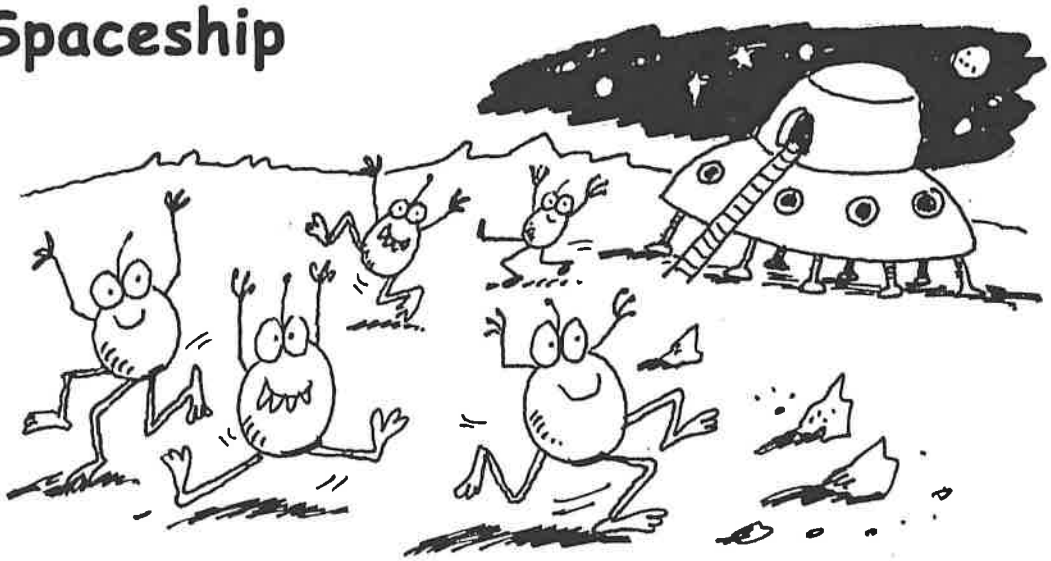
   Pick a different pair of numbers.
   Write the numbers and the answer.

   Keep doing it.
   How many different answers can you get?

2. Now take one number from the other.
   How many different answers can you get now?

Puzzles and problems for Years 3 and 4

Spaceship



Some Tripods and Bipods flew from planet Zeno.
There were at least two of each of them.

Tripods have 3 legs.
Bipods have 2 legs.
There were 23 legs altogether.

How many Tripods were there?
How many Bipods?

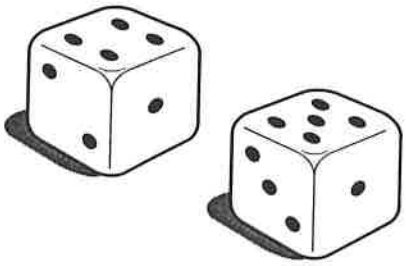
Find two different answers.

Roly poly

The dots on opposite faces of a dice add up to 7.

1. Imagine rolling one dice.
   The score is the total number of dots you can see.
   You score 17.
   Which number is face down?
   How did you work out your answer?

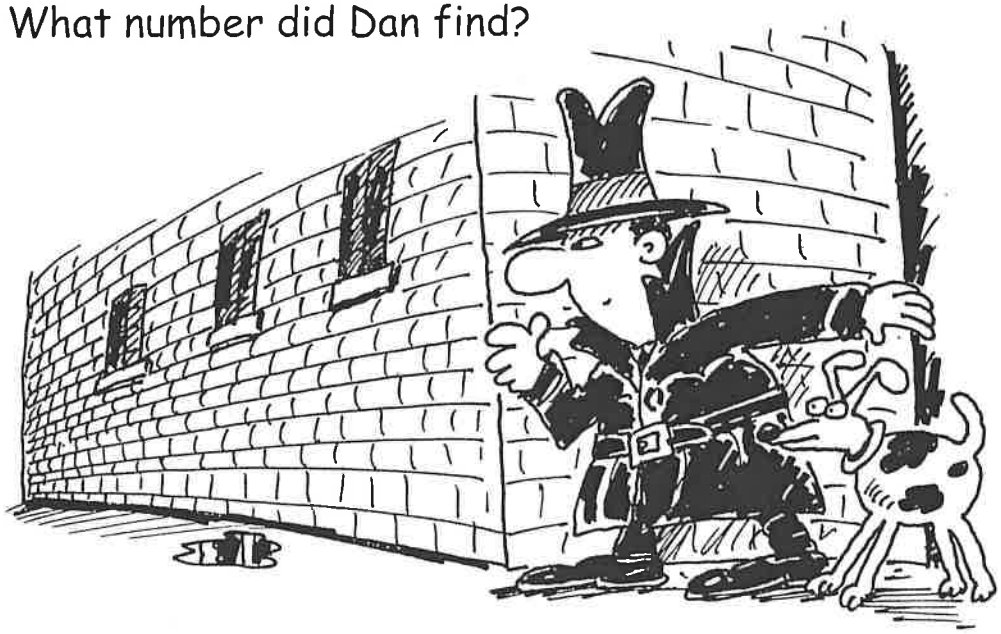
2. Imagine rolling two dice.
   The dice do not touch each other.



   The score is the total number of dots you can see.
   Which numbers are face down to score 30?

Dan the detective

1. Dan the detective looked for a number.
   He found a two-digit number less than 50.
   The sum of its digits was 12.
   Their difference was 4.
   What number did Dan find?

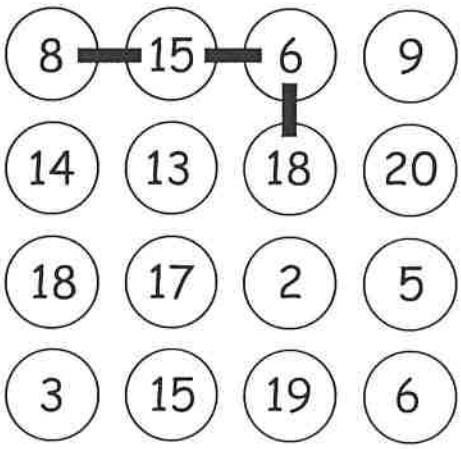


2. Dan found a two-digit odd number.
   One of its digits was half the other.
   The number was greater than 50.
   What number did Dan find?

Puzzles and problems for Years 5 and 6

Joins

Join any four numbers.
Find their total.
Joins can go up, down or sideways, but not diagonally.
The score shown is 8 + 15 + 6 + 18 = 47.



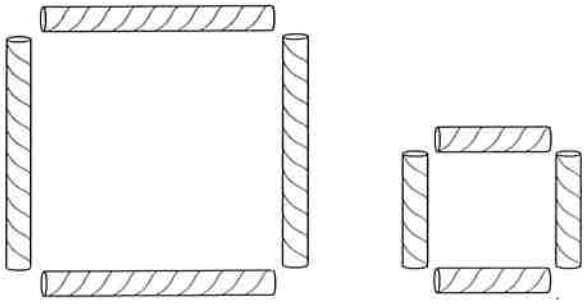
Find the highest possible score.
Find the lowest possible score.

Try joining five numbers.
Now try joining five numbers using only diagonal joins.

Square it up

You need six drinking straws each the same length.
Cut two of them in half.
You now have eight straws, four long and four short.

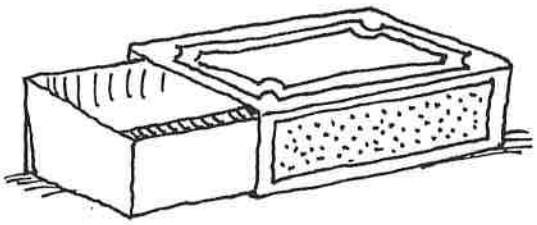
You can make 2 squares
from the eight straws.



Arrange your eight straws to make 3 squares, all the same size.

A perfect match

1. A matchbox tray slides into its outer cover.
   In how many different ways can you do this?



2. Imagine a cube and an open box just large enough to hold it.
   In how many different ways can you fit the cube into the box?