WORKSHEET 002

ODD ONE OUT


7 STARS


MARBLES


CIRCLES \& SQUARES


SWITCHES

## ODD ONE OUT

Quite simply, figure out which is the odd one out.

## MARBLES

Here we have 6 containers, half of which are holding a number of marbles. You need to arrange them so that the empty containers alternate with the ones holding marbles. Can you do it moving just one container?

## CIRCLES \& SQUARES

Sharpen your logical senses by getting your head around this simple little problem. See if you can decide on which of the five states shown (A to E), at the bottom of this image, is the correct final state missing at the end of the sequence above it.

## 7 STARS

Here is a grid containing 7 stars of varying colours. The rows are indicated by numbers and the columns by letters. Your task is to place more stars into the grid in such a way that every row and every column has one of each coloured star. Also, the outlined compartments must contain one of each star too.

See if you can complete the grid.

## SWITCHES

Switch A turns lights 1 and 2 on/off or off/on

Switch B turns lights 2 and 4 on/off or off/on

Switch C turns lights 1 and 3 on/off or off/on

Switch D turns lights 3 and 4 on/off or off/on

When the switches are thrown in sequence, $D, C, A$ and $B$, the result is that Fig. 1 turns into Fig.2, so one of the
switches is not working at all. Determine which switch is faulty.

Then, having determined which switch doesn't work, what sequence of switches will you use to get the lights back to their original state?
(All the working switches must be used at least once).

