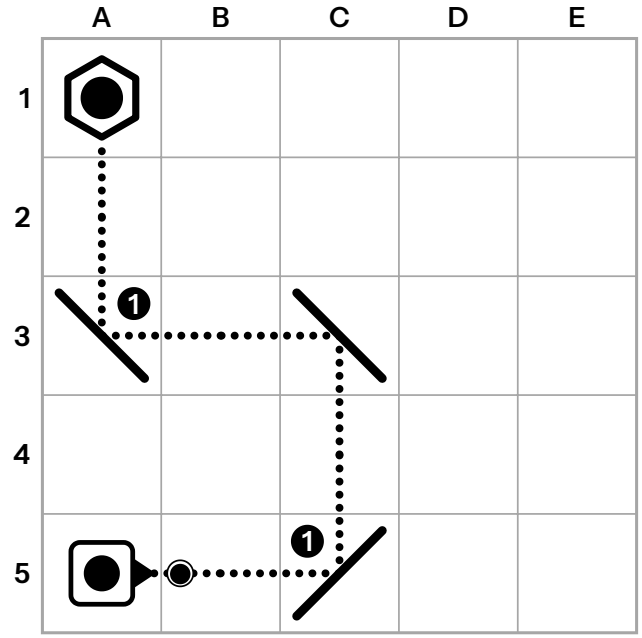
Answers and explanations

Path of Light

Light in the answer diagrams

white · red · green · blue · number of taps

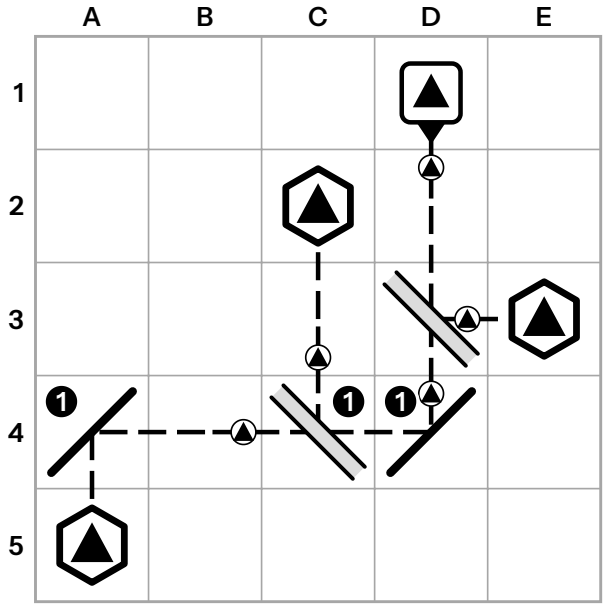
1 Reflection



Turn A3 and C5 once each. Leave C3 alone.

The light turns up at C5, left at C3 and up again at A3, reaching the crystal at A1.

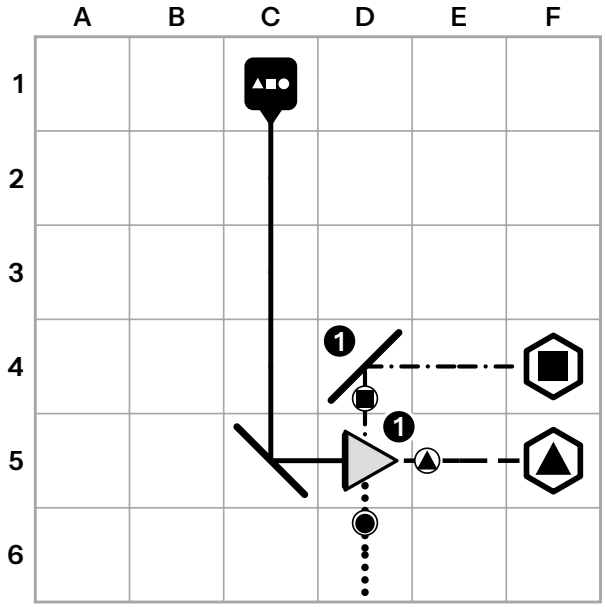
2 Beam splitter



Turn A4, C4 and D4 once each. Leave D3 alone.

The beam splitter at D3 sends one beam to E3. The rest turns left at the D4 mirror and splits again at C4, reaching C2 and, by way of the A4 mirror, A5.

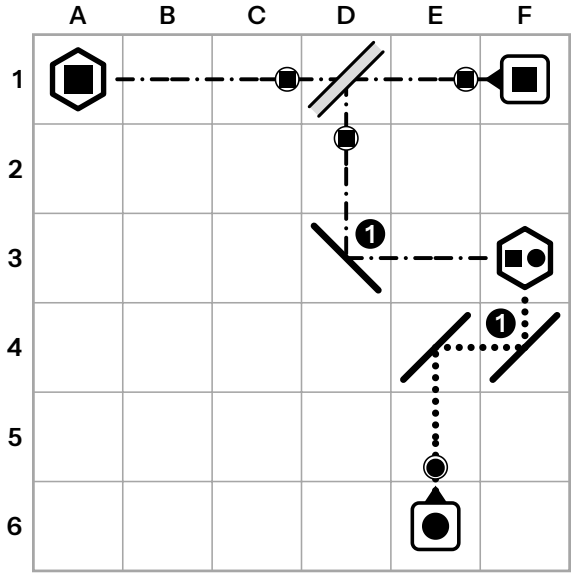
3 Prism



Turn D4 and D5 once each. Leave C5 alone.

The C5 mirror sends white light into the base of the prism. Red goes straight on to F5, green leaves upward and turns at the D4 mirror to F4, and blue runs off the bottom of the board.

4 Mixing light



Turn D3 and F4 once each. Leave D1 and E4 alone.

Green light from the top right source splits at D1: one beam reaches the A1 crystal, the other turns at the D3 mirror toward F3. Blue light reaches the same F3 crystal by way of the E4 and F4 mirrors, making cyan.

Back page answers

1. Three times, by 90 degrees each time.
2. E3 gets one half; C2 and A5 get one quarter each. Every pass through a beam splitter divides the light in two.
3. It ran off the bottom of the board. A blue crystal on D6 would have lit up.
4. Yellow, magenta, cyan, white. Yellow and blue light make white, because yellow light already contains red and green.