Easy 1
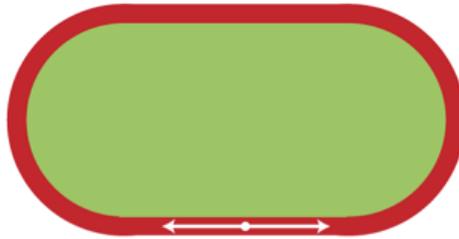

Above is a picture of a parallelobox. How many diagonals (from corner to opposite corner) does it have?

Answer: 4.

There are 8 corners (just like a cube), and so 4 diagonals connecting them.

Easy 2

A runner and a walker are standing together on a 400 metres circular track. They take off in opposite directions, the runner at 4 metres per second and the walker at 1 metre per second. How long will it take until they meet again?

Answer: 80 seconds.

They are running away from each other at a combined speed of 5 metres per second. So, it takes 80 seconds to cover the 400 metres.
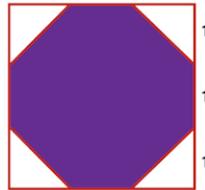
Easy 3

Three empty glasses are lined up next to three full glasses. You want the empty and full glasses to alternate, but you are only allowed to touch one of the glasses. How do you do it?

Answer: Take the second glass from the left and pour its contents into the fifth glass.

Easy 4

What is the area of the purple octagon?

Answer: 7.

The area is of the square is 3 x 3 = 9. Then we have to subtract the areas of the four triangles, which in total is 4 x 1/2 x 1 x 1 = 2.

Easy 5

Together, four rabbits can dig four holes in four days. How long would it take eight rabbits to dig eight holes?

Answer: Four days.

Eight rabbits can dig twice as many holes as four rabbits. So, in four days the eight rabbits will dig eight holes.

Easy 6

Karl: Mina is lying.
Mina: Lara is lying.
Lara: I am not lying!

One of three people above is lying and the other two are telling the truth. Who is the liar?

Answer: Mina.

We just work through the possibilities. First, if Karl is lying, that means Mina must be telling the truth, which means that Lara is also lying; that's two liars, which we know is not the case. Secondly, if Mina is lying then Karl and Lara are both telling the truth; that means we have just one liar, and a solution to the puzzle. Finally, if Lara is lying then Mina is telling the truth, and that means Karl is also lying; that's two liars again.
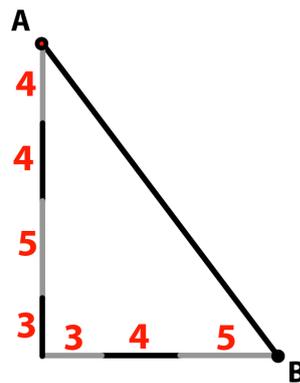
Easy 7
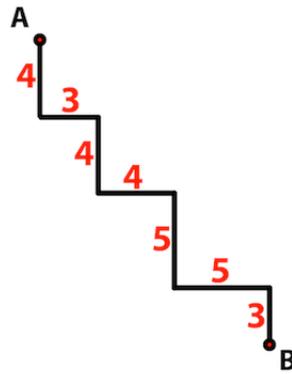
How far is it from A to B?

Answer: 20.

We travel a total of 16 down and 12 across. That's two sides of a right-angled triangle. The required distance is the hypotenuse, and Pythagoras's theorem says that this is length 20.


Easy 8

You have a pile of 10 cent, 5 cent and (very old) 2 cent coins. In how many different ways can you make exactly 31 cents?

Answer: 6.

Since 31 is an odd number, we have to use an odd number of 5-cent coins: that means we have either five, three or one of them. If we use five 5-cent coins that means we must use no 10-cent coins and three 2-cent coins: the solution is (0,5,3). If we use three 5-cent coins then we can use either one or no 10-cent coins, giving the two solutions (0,3,8) and (1,3,3). Finally, if we use only one 5-cent coin, then we find the solutions (0,1,13), (1,1,8) and (2,1,3).

Easy 9
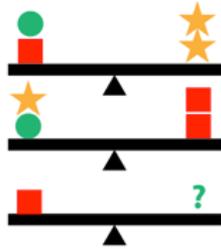
What will balance the red square (apart from another red square)?

Answer: Either a yellow star or a green circle.

Combine the items on the two seesaws: the right side of the second seesaw with the left side of the first seesaw, and vice versa. The seesaw will still balance, and so we have the equation

<p style="text-align:center">circle + 3 squares = 3 stars + circle</p>

So, the squares and the stars must be equal. Then looking at the original seesaws, it is easy to see that the circles must also be equal.

Easy 10

In English there is only one natural number which when written as a word has its letters in alphabetical order. Which number is it?

Answer: forty.

It is easy to check that "one", "two", "three", "four", ... "ten" don't work, and almost every number in English starts with one of those words. The only exceptions are the numbers in the teens, which can all be checked to not work, and the numbers in the forties (with the strange spelling "for…" instead of "four…".