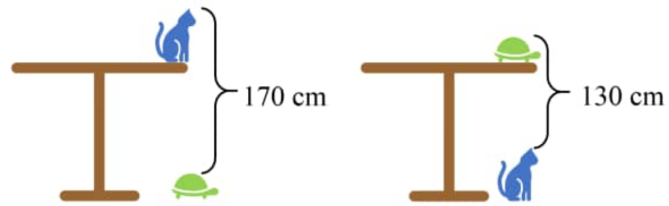
Here are the full, or partial solutions.

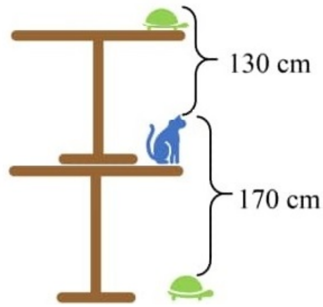
Year 8 and below

Find the height of the table.



Solution

If we put the second table on top of the first table on top of the other, the solution becomes obvious!
You can see that the 130 + 170 from the top of the tortoise on the floor to the top of the tortoise on the table is the same as the height of two tables. So the height of one table is 150 cm.



Year 9 and above

The larger square has sides of length 20 cm, the smaller square has sides of length 10 cm. Find the shaded area.

Solution

Label some vertices and add the line DR, perpendicular to MN and through D. EQ has length a, as EC is 20 cm, PC must be $20 - a - 10 = 10 - a$.
Now consider $\triangle EMQ$ and $\angle MEQ$.
As ABCE and MNPQ are both squares, $EC \parallel MN$.
So $\angle DMN = \angle MEQ$ and, $\triangle EMQ$ and $\triangle DMR$ are similar.
Notice also that by the same reasoning $\angle PCN$ and $\angle RND$ are equal.
Now, if $MR = a$ then $DR = 10$ by similar triangles. Then if $DR = 10$ then $RN = 10 - a$ by similarity (congruency) with $\triangle CNP$.
So assuming $MR = a$ leads to $RN = 10 - a$ and we have $MR + RN = a + (10 - a) = 10$ which is correct. We have shown DR is 10 cm, so $\triangle MEQ$ and $\triangle DMN$ are congruent, they have the same area. Also $\triangle PCN$ and $\triangle DNR$ have the same area.
The shaded area is $a \times 10 + (10 - a) \times 10 = 100\ \text{cm}^2$
You can see this looks right if you imagine folding the shaded triangles into the 10×10 square along their boundaries with the square.
We have shown that the position of the smaller square along the top of the larger square, does not affect the shaded area.