How To Be on Time in Estonia



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SOLUTIONS

From the hours on the clock faces we can deduce that $\ddot{u}ks$ is 1, kaks is 2, and viis is probably 5. Since it's likely that minutit means "minute" and $l\ddot{u}bi$, which appears whenever there is a minutit, means "past." We can see much of this clearly in viis minutit kaks $l\ddot{u}bi$, which corresponds to 2:05. The words veerand and kolmveerand seem to refer to a quarter hour and three quarters of an hour, and pool is half an hour. From that, we can also deduce that kolm is probably 3. In seeing that both pool neli and veerand neli are expressions, we can guess that neli is a number, either 4 or 9, the only numbers left. The word $\ddot{u}heksa$, based on its position in the phrase, is probably the other missing number. That provides us with most of the numbers and terms we need, but something isn't quite right.

What's confusing now is that the expression for 1:15, *veerand kaks*, contains the word for 2, and not 1. And the clock that displays 10:45 does not have the word for 10 ($k\ddot{u}mme$), but rather $\ddot{u}ksteist$. We see that another one of the clues contains kaksteist. Knowing which numbers we need to represent the time, it stands to reason that $\ddot{u}ksteist$ is 11 and kaksteist is 12. Finally, in the phrases, we see the word $kolmk\ddot{u}mmend$, which appears to be a combination of 3 (kolm) and 10 ($k\ddot{u}mme$), which is probably 30 and shows how multiples of 10 are formed.

The deductive leap is that, in Estonian, a "quarter past the hour" is instead described as "a quarter of an hour on the way to the next hour," "half past the hour" is described as "half an hour on the way to the next hour," and "three quarters past the hour" is described as "three quarters of an hour on the way to the next hour." However, when specific numbers are given for minutes (*viis minutit*), the hour used is the current hour, not the next one. With this in mind, we can finally determine from the original clock faces that *neli* is 4 and *üheksa* is 9.

Challenge 2

Putting all of these ideas together, the answers are:

Challenge 1

Challenge			Challenge 2	
a.	Kakskümmend viis minutit üheksa läbi	9:25	a. 4:15	Veerand viis
b.	Kolmveerand kaksteist	11:45	b. 8:45	Kolmveerand üheksa
c.	Pool kolm	2:30	c. 11:30	Pool kaksteist
d.	Veerand neli	3:15	d. 7:05	Viis minutit seitse läbi
e.	Kolmkümmend viis minutit kuus läbi	6:35	e. 12:30	Pool üks