Exercise 1A

Question 7:

Let x = 2.1 and y = 2.2

Then, x < y because 2.1 < 2.2

Or we can say that, $\frac{21}{10} < \frac{22}{10}$

Or, $\frac{21\times100}{10\times100} = \frac{22\times100}{10\times100}$

That is, we have, $\frac{2100}{1000} < \frac{2200}{1000}$

We know that,

$2100<2105<2110<2115<2120<2125<2130<2135<2140<2145$
$<2150<2155<2160<2170<2175<2180<2185<2190<2195<2200$

Therefore, we can have,

$$\frac{2100}{1000} < \frac{2105}{1000} < \frac{2110}{1000} < \frac{2115}{1000} < \frac{2120}{1000} < \frac{2125}{1000} < \frac{2130}{1000} < \frac{2135}{1000} < \frac{2140}{1000} < \frac{2145}{1000} < \frac{2150}{1000}$$
$$< \frac{2155}{1000} < \frac{2160}{1000} < \frac{2165}{1000} < \frac{2170}{1000} < \frac{2175}{1000} < \frac{2180}{1000} < \frac{2185}{1000} < \frac{2190}{1000} < \frac{2195}{1000} < \frac{2200}{1000}$$

Therefore, 16 rational numbers between, 2.1 and 2.2 are:

$$\frac{2105}{1000}, \frac{2110}{1000}, \frac{2115}{1000}, \frac{2120}{1000}, \frac{2125}{1000}, \frac{2130}{1000}, \frac{2135}{1000}, \frac{2140}{1000}, \frac{2145}{1000},$$
$$\frac{2150}{1000}, \frac{2155}{1000}, \frac{2160}{1000}, \frac{2165}{1000}, \frac{2170}{1000}, \frac{2175}{1000}, \frac{2180}{1000}$$

So, 16 rational numbers between 2.1 and 2.2 are: 2.105, 2.11, 2.115, 2.12, 2.125, 2.13, 2.135, 2.14, 2.145, 2.15, 2.155, 2.16, 2.165, 2.17, 2.175, 2.18

********** END **********