



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, $\frac{21}{10} < \frac{22}{10}$

$$\text{Or, } \frac{21 \times 100}{10 \times 100} = \frac{22 \times 100}{10 \times 100}$$

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

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

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