Exercise 1A

Question 5:

Let $x = x = \dfrac{2}{5}$ and $y = \dfrac{3}{4}$

Then, $x < y$ because $\dfrac{2}{5} < \dfrac{3}{4}$

Or we can say that, $\dfrac{2 \times 4}{5 \times 4} = \dfrac{3 \times 5}{4 \times 5}$

That is, $\dfrac{8}{20} < \dfrac{15}{20}$.

We know that, $8 < 9 < 10 < 11 < 12 < 13 < 14 < 15$.

Therefore, we have,

$$\dfrac{8}{20} < \dfrac{9}{20} < \dfrac{10}{20} < \dfrac{11}{20} < \dfrac{12}{20} < \dfrac{13}{20} < \dfrac{14}{20} < \dfrac{15}{20}$$

Thus, 5 rational numbers between, $\dfrac{8}{20}$ and $\dfrac{15}{20}$ are:

$$\dfrac{9}{20}, \dfrac{10}{20}, \dfrac{11}{20}, \dfrac{12}{20} \text{ and } \dfrac{13}{20}$$

Question 6:

Let $x = 3$ and $y = 4$

Then, $x < y$, because $3 < 4$

We can say that, $\dfrac{21}{7} < \dfrac{28}{7}$.

We know that, $21 < 22 < 23 < 24 < 25 < 26 < 27 < 28$.

Therefore, we have, $\dfrac{21}{7} < \dfrac{22}{7} < \dfrac{23}{7} < \dfrac{24}{7} < \dfrac{25}{7} < \dfrac{26}{7} < \dfrac{27}{7} < \dfrac{28}{7}$

Therefore, 6 rational numbers between 3 and 4 are:

$$\dfrac{22}{7}, \dfrac{23}{7}, \dfrac{24}{7}, \dfrac{25}{7}, \dfrac{26}{7}, \dfrac{27}{7}$$

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