



Rewrite each infinitely repeating decimal as a rational number (fraction).

1) $0.52\overline{74}$

2) $9.98\overline{71}$

3) $0.903\overline{16}$

4) $69.9\overline{8}$

5) $2.24\overline{14}$

6) $44.8\overline{50}$

7) $0.5\overline{33}$

8) $9.39\overline{8}$

9) $0.7\overline{83}$

10) $7.408\overline{77}$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Rewrite each infinitely repeating decimal as a rational number (fraction).

1) $0.52\overline{74}$

$$\begin{aligned} f &= 0.52\overline{74} \\ 10,000f &= 5274.\overline{4} \\ - 1,000f &= 0527.\overline{4} \\ \hline 9000f &= 4747 \end{aligned}$$

$$f = \frac{4747}{9000}$$

2) $9.987\overline{1}$

$$\begin{aligned} f &= 9.987\overline{1} \\ 10,000f &= 99871.\overline{1} \\ - 1,000f &= 09987.\overline{1} \\ \hline 9000f &= 89884 \end{aligned}$$

$$f = \frac{89884}{9000}$$

3) $0.903\overline{16}$

$$\begin{aligned} f &= 0.903\overline{16} \\ 100,000f &= 90316.\overline{16} \\ - 1,000f &= 00903.\overline{16} \\ \hline 99000f &= 89413 \end{aligned}$$

$$f = \frac{89413}{99000}$$

4) $69.\overline{98}$

$$\begin{aligned} f &= 69.\overline{98} \\ 100f &= 6998.\overline{8} \\ - 10f &= 0699.\overline{8} \\ \hline 90f &= 6299 \end{aligned}$$

$$f = \frac{6299}{90}$$

5) $2.24\overline{14}$

$$\begin{aligned} f &= 2.24\overline{14} \\ 10,000f &= 22414.\overline{14} \\ - 100f &= 00224.\overline{14} \\ \hline 9900f &= 22190 \end{aligned}$$

$$f = \frac{22190}{9900}$$

6) $44.\overline{850}$

$$\begin{aligned} f &= 44.\overline{850} \\ 1,000f &= 44850.\overline{50} \\ - 10f &= 00448.\overline{50} \\ \hline 990f &= 44402 \end{aligned}$$

$$f = \frac{44402}{990}$$

7) $0.53\overline{3}$

$$\begin{aligned} f &= 0.53\overline{3} \\ 1,000f &= 533.\overline{3} \\ - 100f &= 053.\overline{3} \\ \hline 900f &= 480 \end{aligned}$$

$$f = \frac{480}{900}$$

8) $9.39\overline{8}$

$$\begin{aligned} f &= 9.39\overline{8} \\ 1,000f &= 9398.\overline{98} \\ - 10f &= 0093.\overline{98} \\ \hline 990f &= 9305 \end{aligned}$$

$$f = \frac{9305}{990}$$

9) $0.7\overline{83}$

$$\begin{aligned} f &= 0.7\overline{83} \\ 1,000f &= 783.\overline{83} \\ - 10f &= 007.\overline{83} \\ \hline 990f &= 776 \end{aligned}$$

$$f = \frac{776}{990}$$

10) $7.408\overline{77}$

$$\begin{aligned} f &= 7.408\overline{77} \\ 100,000f &= 740877.\overline{77} \\ - 1,000f &= 007408.\overline{77} \\ \hline 99000f &= 733469 \end{aligned}$$

$$f = \frac{733469}{99000}$$

Answers

1. $\frac{4747}{9000}$

2. $\frac{89884}{9000}$

3. $\frac{89413}{99000}$

4. $\frac{6299}{90}$

5. $\frac{22190}{9900}$

6. $\frac{44402}{990}$

7. $\frac{480}{900}$

8. $\frac{9305}{990}$

9. $\frac{776}{990}$

10. $\frac{733469}{99000}$