



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

Answers

1) $0.769\overline{1}$

2) $87.33\overline{4}$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3) $0.48\overline{73}$

4) $0.353\overline{96}$

5) $49.2\overline{4}$

6) $2.325\overline{98}$

7) $3.25\overline{21}$

8) $1.30\overline{6}$

9) $1.9\overline{76}$

10) $1.2\overline{5}$



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

Answers

1) $0.769\overline{1}$

$$\begin{aligned} f &= 0.769\overline{1} \\ 10,000f &= 7691.\overline{1} \\ - 1,000f &= 769.\overline{1} \\ \hline 9000f &= 6922 \\ f &= \frac{6922}{9000} \end{aligned}$$

2) $87.3\overline{34}$

$$\begin{aligned} f &= 87.3\overline{34} \\ 1,000f &= 87334.\overline{34} \\ - 10f &= 00873.\overline{34} \\ \hline 990f &= 86461 \\ f &= \frac{86461}{990} \end{aligned}$$

3) $0.48\overline{73}$

$$\begin{aligned} f &= 0.48\overline{73} \\ 10,000f &= 4873.\overline{73} \\ - 100f &= 0048.\overline{73} \\ \hline 9900f &= 4825 \\ f &= \frac{4825}{9900} \end{aligned}$$

4) $0.353\overline{96}$

$$\begin{aligned} f &= 0.353\overline{96} \\ 100,000f &= 35396.\overline{96} \\ - 1,000f &= 00353.\overline{96} \\ \hline 99000f &= 35043 \\ f &= \frac{35043}{99000} \end{aligned}$$

5) $49.2\overline{4}$

$$\begin{aligned} f &= 49.2\overline{4} \\ 100f &= 4924.\overline{4} \\ - 10f &= 0492.\overline{4} \\ \hline 90f &= 4432 \\ f &= \frac{4432}{90} \end{aligned}$$

6) $2.325\overline{98}$

$$\begin{aligned} f &= 2.325\overline{98} \\ 100,000f &= 232598.\overline{98} \\ - 1,000f &= 002325.\overline{98} \\ \hline 99000f &= 230273 \\ f &= \frac{230273}{99000} \end{aligned}$$

7) $3.25\overline{21}$

$$\begin{aligned} f &= 3.25\overline{21} \\ 10,000f &= 32521.\overline{21} \\ - 100f &= 00325.\overline{21} \\ \hline 9900f &= 32196 \\ f &= \frac{32196}{9900} \end{aligned}$$

8) $1.30\overline{6}$

$$\begin{aligned} f &= 1.30\overline{6} \\ 1,000f &= 1306.\overline{6} \\ - 100f &= 0130.\overline{6} \\ \hline 900f &= 1176 \\ f &= \frac{1176}{900} \end{aligned}$$

9) $1.9\overline{76}$

$$\begin{aligned} f &= 1.9\overline{76} \\ 1,000f &= 1976.\overline{76} \\ - 10f &= 0019.\overline{76} \\ \hline 990f &= 1957 \\ f &= \frac{1957}{990} \end{aligned}$$

10) $1.2\overline{5}$

$$\begin{aligned} f &= 1.2\overline{5} \\ 100f &= 125.\overline{5} \\ - 10f &= 012.\overline{5} \\ \hline 90f &= 113 \\ f &= \frac{113}{90} \end{aligned}$$

1. $\frac{6,922}{9,000}$
2. $\frac{86,461}{990}$
3. $\frac{4,825}{9,900}$
4. $\frac{35,043}{99,000}$
5. $\frac{4,432}{90}$
6. $\frac{230,273}{99,000}$
7. $\frac{32,196}{9,900}$
8. $\frac{1,176}{900}$
9. $\frac{1,957}{990}$
10. $\frac{113}{90}$