



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

Answers

1) $2.124\overline{61}$

2) $2.58\overline{76}$

1. _____

3) $65.2\overline{1}$

4) $5.13\overline{7}$

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

5) $0.723\overline{31}$

6) $7.751\overline{5}$

9. _____

10. _____

7) $0.756\overline{4}$

8) $81.56\overline{4}$

9) $0.5\overline{58}$

10) $0.169\overline{8}$



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

$$\begin{aligned}
 1) \quad & 2.124\overline{61} \\
 & f = 2.124\overline{61} \\
 & 100,000f = 212461.\overline{61} \\
 & - \quad 1,000f = 002124.\overline{61} \\
 \hline
 & 99000f = 210337 \\
 & f = \frac{210337}{99000}
 \end{aligned}$$

$$\begin{aligned}
 2) \quad & 2.58\overline{76} \\
 & f = 2.58\overline{76} \\
 & 10,000f = 25876.\overline{76} \\
 & - \quad 100f = 00258.\overline{76} \\
 \hline
 & 9900f = 25618 \\
 & f = \frac{25618}{9900}
 \end{aligned}$$

$$\begin{aligned}
 3) \quad & 65.2\overline{1} \\
 & f = 65.2\overline{1} \\
 & 100f = 6521.\overline{1} \\
 & - \quad 10f = 0652.\overline{1} \\
 \hline
 & 90f = 5869 \\
 & f = \frac{5869}{90}
 \end{aligned}$$

$$\begin{aligned}
 4) \quad & 5.13\overline{7} \\
 & f = 5.13\overline{7} \\
 & 1,000f = 5137.\overline{7} \\
 & - \quad 100f = 0513.\overline{7} \\
 \hline
 & 900f = 4624 \\
 & f = \frac{4624}{900}
 \end{aligned}$$

$$\begin{aligned}
 5) \quad & 0.723\overline{31} \\
 & f = 0.723\overline{31} \\
 & 100,000f = 72331.\overline{31} \\
 & - \quad 1,000f = 00723.\overline{31} \\
 \hline
 & 99000f = 71608 \\
 & f = \frac{71608}{99000}
 \end{aligned}$$

$$\begin{aligned}
 6) \quad & 7.751\overline{5} \\
 & f = 7.751\overline{5} \\
 & 10,000f = 77515.\overline{5} \\
 & - \quad 1,000f = 07751.\overline{5} \\
 \hline
 & 9000f = 69764 \\
 & f = \frac{69764}{9000}
 \end{aligned}$$

$$\begin{aligned}
 7) \quad & 0.756\overline{4} \\
 & f = 0.756\overline{4} \\
 & 10,000f = 7564.\overline{4} \\
 & - \quad 1,000f = 0756.\overline{4} \\
 \hline
 & 9000f = 6808 \\
 & f = \frac{6808}{9000}
 \end{aligned}$$

$$\begin{aligned}
 8) \quad & 81.56\overline{4} \\
 & f = 81.56\overline{4} \\
 & 1,000f = 81564.\overline{4} \\
 & - \quad 10f = 00815.\overline{4} \\
 \hline
 & 990f = 80749 \\
 & f = \frac{80749}{990}
 \end{aligned}$$

$$\begin{aligned}
 9) \quad & 0.5\overline{58} \\
 & f = 0.5\overline{58} \\
 & 1,000f = 558.\overline{58} \\
 & - \quad 10f = 005.\overline{58} \\
 \hline
 & 990f = 553 \\
 & f = \frac{553}{990}
 \end{aligned}$$

$$\begin{aligned}
 10) \quad & 0.169\overline{8} \\
 & f = 0.169\overline{8} \\
 & 10,000f = 1698.\overline{98} \\
 & - \quad 100f = 0016.\overline{98} \\
 \hline
 & 9900f = 1682 \\
 & f = \frac{1682}{9900}
 \end{aligned}$$

Answers

1. $\frac{210337}{99000}$
2. $\frac{25618}{9900}$
3. $\frac{5869}{90}$
4. $\frac{4624}{900}$
5. $\frac{71608}{99000}$
6. $\frac{69764}{9000}$
7. $\frac{6808}{9000}$
8. $\frac{80749}{990}$
9. $\frac{553}{990}$
10. $\frac{1682}{9900}$