



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

1) $67.2\overline{14}$

2) $0.331\overline{6}$

3) $0.17\overline{4}$

4) $0.8899\overline{6}$

5) $6.9\overline{6}$

6) $8.35\overline{7}$

7) $0.46\overline{76}$

8) $85.3\overline{1}$

9) $5.119\overline{9}$

10) $7.2235\overline{0}$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



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

$$\begin{aligned}
 1) \quad & 67.2\overline{14} \\
 & f = 67.2\overline{14} \\
 & 1,000f = 67214.\overline{14} \\
 & - \quad 10f = 00672.\overline{14} \\
 \hline
 & 990f = 66542 \\
 & f = \frac{66542}{990}
 \end{aligned}$$

$$\begin{aligned}
 2) \quad & 0.331\overline{6} \\
 & f = 0.331\overline{6} \\
 & 10,000f = 3316.\overline{6} \\
 & - \quad 1,000f = 0331.\overline{6} \\
 \hline
 & 9000f = 2985 \\
 & f = \frac{2985}{9000}
 \end{aligned}$$

$$\begin{aligned}
 3) \quad & 0.17\overline{4} \\
 & f = 0.17\overline{4} \\
 & 1,000f = 174.\overline{4} \\
 & - \quad 100f = 017.\overline{4} \\
 \hline
 & 900f = 157 \\
 & f = \frac{157}{900}
 \end{aligned}$$

$$\begin{aligned}
 4) \quad & 0.8899\overline{6} \\
 & f = 0.8899\overline{6} \\
 & 100,000f = 88996.\overline{96} \\
 & - \quad 1,000f = 00889.\overline{96} \\
 \hline
 & 99000f = 88107 \\
 & f = \frac{88107}{99000}
 \end{aligned}$$

$$\begin{aligned}
 5) \quad & 6.9\overline{6} \\
 & f = 6.9\overline{6} \\
 & 100f = 696.\overline{6} \\
 & - \quad 10f = 069.\overline{6} \\
 \hline
 & 90f = 627 \\
 & f = \frac{627}{90}
 \end{aligned}$$

$$\begin{aligned}
 6) \quad & 8.35\overline{7} \\
 & f = 8.35\overline{7} \\
 & 1,000f = 8357.\overline{57} \\
 & - \quad 10f = 0083.\overline{57} \\
 \hline
 & 990f = 8274 \\
 & f = \frac{8274}{990}
 \end{aligned}$$

$$\begin{aligned}
 7) \quad & 0.46\overline{76} \\
 & f = 0.46\overline{76} \\
 & 10,000f = 4676.\overline{76} \\
 & - \quad 100f = 0046.\overline{76} \\
 \hline
 & 9900f = 4630 \\
 & f = \frac{4630}{9900}
 \end{aligned}$$

$$\begin{aligned}
 8) \quad & 85.3\overline{1} \\
 & f = 85.3\overline{1} \\
 & 100f = 8531.\overline{1} \\
 & - \quad 10f = 0853.\overline{1} \\
 \hline
 & 90f = 7678 \\
 & f = \frac{7678}{90}
 \end{aligned}$$

$$\begin{aligned}
 9) \quad & 5.119\overline{9} \\
 & f = 5.119\overline{9} \\
 & 10,000f = 51199.\overline{99} \\
 & - \quad 100f = 00512.\overline{99} \\
 \hline
 & 9900f = 50688 \\
 & f = \frac{50688}{9900}
 \end{aligned}$$

$$\begin{aligned}
 10) \quad & 7.2235\overline{0} \\
 & f = 7.2235\overline{0} \\
 & 100,000f = 722350.\overline{50} \\
 & - \quad 1,000f = 007223.\overline{50} \\
 \hline
 & 99000f = 715127 \\
 & f = \frac{715127}{99000}
 \end{aligned}$$

Answers

1. $\frac{66542}{990}$
2. $\frac{2985}{9000}$
3. $\frac{157}{900}$
4. $\frac{88107}{99000}$
5. $\frac{627}{90}$
6. $\frac{8274}{990}$
7. $\frac{4630}{9900}$
8. $\frac{7678}{90}$
9. $\frac{50688}{9900}$
10. $\frac{715127}{99000}$