



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

1) $0.86\overline{18}$

2) $8.379\overline{4}$

3) $4.6\overline{55}$

4) $0.777\overline{7}$

5) $0.9\overline{80}$

6) $38.2\overline{1}$

7) $3.43\overline{8}$

8) $0.83\overline{9}$

9) $9.9\overline{6}$

10) $0.736\overline{64}$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



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

$$\begin{aligned}
 &1) \ 0.8\overline{618} \\
 &f = 0.8\overline{618} \\
 &10,000f = 8618.\overline{18} \\
 &- \quad 100f = 0086.\overline{18} \\
 &\hline
 &9900f = 8532 \\
 &f = \frac{8532}{9900}
 \end{aligned}$$

$$\begin{aligned}
 &2) \ 8.379\overline{4} \\
 &f = 8.379\overline{4} \\
 &10,000f = 83794.\overline{4} \\
 &- \quad 1,000f = 08379.\overline{4} \\
 &\hline
 &9000f = 75415 \\
 &f = \frac{75415}{9000}
 \end{aligned}$$

$$\begin{aligned}
 &3) \ 4.\overline{655} \\
 &f = 4.\overline{655} \\
 &1,000f = 4655.\overline{55} \\
 &- \quad 10f = 0046.\overline{55} \\
 &\hline
 &990f = 4609 \\
 &f = \frac{4609}{990}
 \end{aligned}$$

$$\begin{aligned}
 &4) \ 0.777\overline{7} \\
 &f = 0.777\overline{7} \\
 &10,000f = 7777.\overline{7} \\
 &- \quad 1,000f = 0777.\overline{7} \\
 &\hline
 &9000f = 7000 \\
 &f = \frac{7000}{9000}
 \end{aligned}$$

$$\begin{aligned}
 &5) \ 0.9\overline{80} \\
 &f = 0.9\overline{80} \\
 &1,000f = 980.\overline{80} \\
 &- \quad 10f = 009.\overline{80} \\
 &\hline
 &990f = 971 \\
 &f = \frac{971}{990}
 \end{aligned}$$

$$\begin{aligned}
 &6) \ 38.2\overline{1} \\
 &f = 38.2\overline{1} \\
 &100f = 3821.\overline{1} \\
 &- \quad 10f = 0382.\overline{1} \\
 &\hline
 &90f = 3439 \\
 &f = \frac{3439}{90}
 \end{aligned}$$

$$\begin{aligned}
 &7) \ 3.43\overline{8} \\
 &f = 3.43\overline{8} \\
 &1,000f = 3438.\overline{8} \\
 &- \quad 100f = 0343.\overline{8} \\
 &\hline
 &900f = 3095 \\
 &f = \frac{3095}{900}
 \end{aligned}$$

$$\begin{aligned}
 &8) \ 0.83\overline{9} \\
 &f = 0.83\overline{9} \\
 &1,000f = 839.\overline{9} \\
 &- \quad 100f = 084.\overline{9} \\
 &\hline
 &900f = 756 \\
 &f = \frac{756}{900}
 \end{aligned}$$

$$\begin{aligned}
 &9) \ 9.\overline{96} \\
 &f = 9.\overline{96} \\
 &100f = 996.\overline{6} \\
 &- \quad 10f = 099.\overline{6} \\
 &\hline
 &90f = 897 \\
 &f = \frac{897}{90}
 \end{aligned}$$

$$\begin{aligned}
 &10) \ 0.736\overline{64} \\
 &f = 0.736\overline{64} \\
 &100,000f = 73664.\overline{64} \\
 &- \quad 1,000f = 00736.\overline{64} \\
 &\hline
 &99000f = 72928 \\
 &f = \frac{72928}{99000}
 \end{aligned}$$

Answers

1. $\frac{8532}{9900}$
2. $\frac{75415}{9000}$
3. $\frac{4609}{990}$
4. $\frac{7000}{9000}$
5. $\frac{971}{990}$
6. $\frac{3439}{90}$
7. $\frac{3095}{900}$
8. $\frac{756}{900}$
9. $\frac{897}{90}$
10. $\frac{72928}{99000}$