



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)  $0.98\overline{0}$

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).

$$\begin{aligned}
 1) \quad & 0.86\overline{18} \\
 & f = 0.86\overline{18} \\
 & 10,000f = 8618.\overline{18} \\
 & - \quad 100f = 0086.\overline{18} \\
 \hline
 & 9900f = 8532 \\
 & f = \frac{8532}{9900}
 \end{aligned}$$

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

$$\begin{aligned}
 3) \quad & 4.6\overline{55} \\
 & f = 4.6\overline{55} \\
 & 1,000f = 4655.\overline{55} \\
 & - \quad 10f = 0046.\overline{55} \\
 \hline
 & 990f = 4609 \\
 & f = \frac{4609}{990}
 \end{aligned}$$

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

$$\begin{aligned}
 5) \quad & 0.98\overline{0} \\
 & f = 0.98\overline{0} \\
 & 1,000f = 980.\overline{0} \\
 & - \quad 10f = 009.\overline{0} \\
 \hline
 & 990f = 971 \\
 & f = \frac{971}{990}
 \end{aligned}$$

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

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

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

$$\begin{aligned}
 9) \quad & 9.9\overline{6} \\
 & f = 9.9\overline{6} \\
 & 100f = 996.\overline{6} \\
 & - \quad 10f = 099.\overline{6} \\
 \hline
 & 90f = 897 \\
 & f = \frac{897}{90}
 \end{aligned}$$

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

**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.  $\frac{72928}{99000}$