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

1) $0.9\overline{77}$

2) $2.5\overline{6}$

3) $9.5\overline{11}$

4) $0.907\overline{56}$

5) $0.92\overline{6}$

6) $8.34\overline{4}$

7) $8.606\overline{32}$

8) $3.95\overline{54}$

9) $5.728\overline{8}$

10) $68.5\overline{4}$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

1-10	90	80	70	60	50	40	30	20	10	0

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

1) $0.9\overline{77}$

$f = 0.9\overline{77}$

$1{,}000f = 977.\overline{77}$

$- \quad 10f = 009.\overline{77}$

$990f = 968$

$f = \frac{968}{990}$

2) $2.5\overline{6}$

$f = 2.5\overline{6}$

$100f = 256.\overline{6}$

$- \quad 10f = 025.\overline{6}$

$90f = 231$

$f = \frac{231}{90}$

3) $9.5\overline{11}$

$f = 9.5\overline{11}$

$1{,}000f = 9511.\overline{11}$

$- \quad 10f = 0095.\overline{11}$

$990f = 9416$

$f = \frac{9416}{990}$

4) $0.907\overline{56}$

$f = 0.907\overline{56}$

$100{,}000f = 90756.\overline{56}$

$- \quad 1{,}000f = 00907.\overline{56}$

$99000f = 89849$

$f = \frac{89849}{99000}$

5) $0.92\overline{6}$

$f = 0.92\overline{6}$

$1{,}000f = 926.\overline{6}$

$- \quad 100f = 092.\overline{6}$

$900f = 834$

$f = \frac{834}{900}$

6) $8.34\overline{4}$

$f = 8.34\overline{4}$

$1{,}000f = 8344.\overline{4}$

$- \quad 100f = 0834.\overline{4}$

$900f = 7510$

$f = \frac{7510}{900}$

7) $8.606\overline{32}$

$f = 8.606\overline{32}$

$100{,}000f = 860632.\overline{32}$

$- \quad 1{,}000f = 008606.\overline{32}$

$99000f = 852026$

$f = \frac{852026}{99000}$

8) $3.95\overline{54}$

$f = 3.95\overline{54}$

$10{,}000f = 39554.\overline{54}$

$- \quad 100f = 00395.\overline{54}$

$9900f = 39159$

$f = \frac{39159}{9900}$

9) $5.728\overline{8}$

$f = 5.728\overline{8}$

$10{,}000f = 57288.\overline{8}$

$- \quad 1{,}000f = 05728.\overline{8}$

$9000f = 51560$

$f = \frac{51560}{9000}$

10) $68.5\overline{4}$

$f = 68.5\overline{4}$

$100f = 6854.\overline{4}$

$- \quad 10f = 0685.\overline{4}$

$90f = 6169$

$f = \frac{6169}{90}$

Answers

1. $\frac{968}{990}$
2. $\frac{231}{90}$
3. $\frac{9416}{990}$
4. $\frac{89849}{99000}$
5. $\frac{834}{900}$
6. $\frac{7510}{900}$
7. $\frac{852026}{99000}$
8. $\frac{39159}{9900}$
9. $\frac{51560}{9000}$
10. $\frac{6169}{90}$

1-10	90	80	70	60	50	40	30	20	10	0