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

1) $6.985\overline{5}$

2) $69.8\overline{9}$

3) $7.76\overline{28}$

4) $0.1\overline{75}$

5) $0.889\overline{3}$

6) $2.17\overline{1}$

7) $9.7\overline{6}$

8) $3.8\overline{45}$

9) $0.851\overline{29}$

10) $0.54\overline{45}$

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) $6.985\overline{5}$

$f = 6.985\overline{5}$

$10{,}000f = 69855.\overline{5}$

$-\ 1{,}000f = 06985.\overline{5}$

$9000f = 62870$

$f = \frac{62870}{9000}$

2) $69.8\overline{9}$

$f = 69.8\overline{9}$

$100f = 6989.\overline{9}$

$-\ 10f = 0699.\overline{9}$

$90f = 6291$

$f = \frac{6291}{90}$

3) $7.76\overline{28}$

$f = 7.76\overline{28}$

$10{,}000f = 77628.\overline{28}$

$-\ 100f = 00776.\overline{28}$

$9900f = 76852$

$f = \frac{76852}{9900}$

4) $0.1\overline{75}$

$f = 0.1\overline{75}$

$1{,}000f = 175.\overline{75}$

$-\ 10f = 001.\overline{75}$

$990f = 174$

$f = \frac{174}{990}$

5) $0.889\overline{3}$

$f = 0.889\overline{3}$

$10{,}000f = 8893.\overline{3}$

$-\ 1{,}000f = 0889.\overline{3}$

$9000f = 8004$

$f = \frac{8004}{9000}$

6) $2.17\overline{1}$

$f = 2.17\overline{1}$

$1{,}000f = 2171.\overline{1}$

$-\ 100f = 0217.\overline{1}$

$900f = 1954$

$f = \frac{1954}{900}$

7) $9.7\overline{6}$

$f = 9.7\overline{6}$

$100f = 976.\overline{6}$

$-\ 10f = 097.\overline{6}$

$90f = 879$

$f = \frac{879}{90}$

8) $3.8\overline{45}$

$f = 3.8\overline{45}$

$1{,}000f = 3845.\overline{45}$

$-\ 10f = 0038.\overline{45}$

$990f = 3807$

$f = \frac{3807}{990}$

9) $0.851\overline{29}$

$f = 0.851\overline{29}$

$100{,}000f = 85129.\overline{29}$

$-\ 1{,}000f = 00851.\overline{29}$

$99000f = 84278$

$f = \frac{84278}{99000}$

10) $0.5\overline{445}$

$f = 0.5\overline{445}$

$10{,}000f = 5445.\overline{45}$

$-\ 100f = 0054.\overline{45}$

$9900f = 5391$

$f = \frac{5391}{9900}$

Answers

1. $\frac{62870}{9000}$
2. $\frac{6291}{90}$
3. $\frac{76852}{9900}$
4. $\frac{174}{990}$
5. $\frac{8004}{9000}$
6. $\frac{1954}{900}$
7. $\frac{879}{90}$
8. $\frac{3807}{990}$
9. $\frac{84278}{99000}$
10. $\frac{5391}{9900}$

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