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

1) $9.298\overline{4}$

2) $3.61\overline{4}$

3) $1.232\overline{16}$

4) $74.3\overline{35}$

5) $0.1\overline{96}$

6) $0.894\overline{30}$

7) $0.24\overline{55}$

8) $43.9\overline{1}$

9) $0.110\overline{6}$

10) $3.3\overline{10}$

Answers

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

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

Converting Repeating Decimals to Fractions Name: **Answer Key**

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

1) $9.298\overline{4}$

$f = 9.298\overline{4}$

$10{,}000f = 92984.\overline{4}$

$-\ \ 1{,}000f = 09298.\overline{4}$

$9000f = 83686$

$f = \frac{83686}{9000}$

2) $3.61\overline{4}$

$f = 3.61\overline{4}$

$1{,}000f = 3614.\overline{4}$

$-\ \ 100f = 0361.\overline{4}$

$900f = 3253$

$f = \frac{3253}{900}$

3) $1.232\overline{16}$

$f = 1.232\overline{16}$

$100{,}000f = 123216.\overline{16}$

$-\ \ 1{,}000f = 001232.\overline{16}$

$99000f = 121984$

$f = \frac{121984}{99000}$

4) $74.3\overline{35}$

$f = 74.3\overline{35}$

$1{,}000f = 74335.\overline{35}$

$-\ \ 10f = 00743.\overline{35}$

$990f = 73592$

$f = \frac{73592}{990}$

5) $0.1\overline{96}$

$f = 0.1\overline{96}$

$1{,}000f = 196.\overline{96}$

$-\ \ 10f = 001.\overline{96}$

$990f = 195$

$f = \frac{195}{990}$

6) $0.894\overline{30}$

$f = 0.894\overline{30}$

$100{,}000f = 89430.\overline{30}$

$-\ \ 1{,}000f = 00894.\overline{30}$

$99000f = 88536$

$f = \frac{88536}{99000}$

7) $0.24\overline{55}$

$f = 0.24\overline{55}$

$10{,}000f = 2455.\overline{55}$

$-\ \ 100f = 0024.\overline{55}$

$9900f = 2431$

$f = \frac{2431}{9900}$

8) $43.9\overline{1}$

$f = 43.9\overline{1}$

$100f = 4391.\overline{1}$

$-\ \ 10f = 0439.\overline{1}$

$90f = 3952$

$f = \frac{3952}{90}$

9) $0.110\overline{6}$

$f = 0.110\overline{6}$

$10{,}000f = 1106.\overline{6}$

$-\ \ 1{,}000f = 0110.\overline{6}$

$9000f = 996$

$f = \frac{996}{9000}$

10) $3.3\overline{10}$

$f = 3.3\overline{10}$

$1{,}000f = 3310.\overline{10}$

$-\ \ 10f = 0033.\overline{10}$

$990f = 3277$

$f = \frac{3277}{990}$

Answers

1. $\frac{83686}{9000}$
2. $\frac{3253}{900}$
3. $\frac{121984}{99000}$
4. $\frac{73592}{990}$
5. $\frac{195}{990}$
6. $\frac{88536}{99000}$
7. $\frac{2431}{9900}$
8. $\frac{3952}{90}$
9. $\frac{996}{9000}$
10. $\frac{3277}{990}$

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