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

1) $7.641\overline{5}$

2) $5.8\overline{34}$

3) $4.950\overline{37}$

4) $0.574\overline{9}$

5) $7.2\overline{1}$

6) $44.4\overline{9}$

7) $2.96\overline{7}$

8) $0.368\overline{34}$

9) $0.24\overline{11}$

10) $0.53\overline{8}$

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) $7.641\overline{5}$

$f = 7.641\overline{5}$

$10{,}000f = 76415.\overline{5}$

$-\ 1{,}000f = 07641.\overline{5}$

$9000f = 68774$

$f = {}^{68774}/_{9000}$

2) $5.8\overline{34}$

$f = 5.8\overline{34}$

$1{,}000f = 5834.\overline{34}$

$-\ 10f = 0058.\overline{34}$

$990f = 5776$

$f = {}^{5776}/_{990}$

3) $4.950\overline{37}$

$f = 4.950\overline{37}$

$100{,}000f = 495037.\overline{37}$

$-\ 1{,}000f = 004950.\overline{37}$

$99000f = 490087$

$f = {}^{490087}/_{99000}$

4) $0.574\overline{9}$

$f = 0.574\overline{9}$

$10{,}000f = 5749.\overline{9}$

$-\ 1{,}000f = 0575.\overline{9}$

$9000f = 5175$

$f = {}^{5175}/_{9000}$

5) $7.2\overline{1}$

$f = 7.2\overline{1}$

$100f = 721.\overline{1}$

$-\ 10f = 072.\overline{1}$

$90f = 649$

$f = {}^{649}/_{90}$

6) $44.4\overline{9}$

$f = 44.4\overline{9}$

$100f = 4449.\overline{9}$

$-\ 10f = 0445.\overline{9}$

$90f = 4005$

$f = {}^{4005}/_{90}$

7) $2.96\overline{7}$

$f = 2.96\overline{7}$

$1{,}000f = 2967.\overline{7}$

$-\ 100f = 0296.\overline{7}$

$900f = 2671$

$f = {}^{2671}/_{900}$

8) $0.3683\overline{4}$

$f = 0.3683\overline{4}$

$100{,}000f = 36834.\overline{34}$

$-\ 1{,}000f = 00368.\overline{34}$

$99000f = 36466$

$f = {}^{36466}/_{99000}$

9) $0.24\overline{11}$

$f = 0.24\overline{11}$

$10{,}000f = 2411.\overline{11}$

$-\ 100f = 0024.\overline{11}$

$9900f = 2387$

$f = {}^{2387}/_{9900}$

10) $0.53\overline{8}$

$f = 0.53\overline{8}$

$1{,}000f = 538.\overline{8}$

$-\ 100f = 053.\overline{8}$

$900f = 485$

$f = {}^{485}/_{900}$

Answers

1. $^{68774}/_{9000}$
2. $^{5776}/_{990}$
3. $^{490087}/_{99000}$
4. $^{5175}/_{9000}$
5. $^{649}/_{90}$
6. $^{4005}/_{90}$
7. $^{2671}/_{900}$
8. $^{36466}/_{99000}$
9. $^{2387}/_{9900}$
10. $^{485}/_{900}$

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