Converting Repeating Decimals to Fractions

Name:

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

1) $7.51\overline{73}$

2) $0.71\overline{9}$

3) $8.62\overline{2}$

4) $6.2\overline{6}$

5) $0.3\overline{84}$

6) $7.817\overline{41}$

7) $7.341\overline{3}$

8) $0.803\overline{9}$

9) $0.33\overline{92}$

10) $4.6\overline{70}$

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) $7.51\overline{73}$

$f = 7.51\overline{73}$

$10{,}000f = 75173.\overline{73}$

$-\quad 100f = 00751.\overline{73}$

$9900f = 74422$

$f = {}^{74422}/_{9900}$

2) $0.71\overline{9}$

$f = 0.71\overline{9}$

$1{,}000f = 719.\overline{9}$

$-\quad 100f = 072.\overline{9}$

$900f = 648$

$f = {}^{648}/_{900}$

3) $8.62\overline{2}$

$f = 8.62\overline{2}$

$1{,}000f = 8622.\overline{2}$

$-\quad 100f = 0862.\overline{2}$

$900f = 7760$

$f = {}^{7760}/_{900}$

4) $6.2\overline{6}$

$f = 6.2\overline{6}$

$100f = 626.\overline{6}$

$-\quad 10f = 062.\overline{6}$

$90f = 564$

$f = {}^{564}/_{90}$

5) $0.3\overline{84}$

$f = 0.3\overline{84}$

$1{,}000f = 384.\overline{84}$

$-\quad 10f = 003.\overline{84}$

$990f = 381$

$f = {}^{381}/_{990}$

6) $7.81\overline{741}$

$f = 7.81\overline{741}$

$100{,}000f = 781741.\overline{41}$

$-\quad 1{,}000f = 007817.\overline{41}$

$99000f = 773924$

$f = {}^{773924}/_{99000}$

7) $7.341\overline{3}$

$f = 7.341\overline{3}$

$10{,}000f = 73413.\overline{3}$

$-\quad 1{,}000f = 07341.\overline{3}$

$9000f = 66072$

$f = {}^{66072}/_{9000}$

8) $0.803\overline{9}$

$f = 0.803\overline{9}$

$10{,}000f = 8039.\overline{9}$

$-\quad 1{,}000f = 0804.\overline{9}$

$9000f = 7236$

$f = {}^{7236}/_{9000}$

9) $0.33\overline{92}$

$f = 0.33\overline{92}$

$10{,}000f = 3392.\overline{92}$

$-\quad 100f = 0033.\overline{92}$

$9900f = 3359$

$f = {}^{3359}/_{9900}$

10) $4.6\overline{70}$

$f = 4.6\overline{70}$

$1{,}000f = 4670.\overline{70}$

$-\quad 10f = 0046.\overline{70}$

$990f = 4624$

$f = {}^{4624}/_{990}$

Answers

1. $^{74422}/_{9900}$
2. $^{648}/_{900}$
3. $^{7760}/_{900}$
4. $^{564}/_{90}$
5. $^{381}/_{990}$
6. $^{773924}/_{99000}$
7. $^{66072}/_{9000}$
8. $^{7236}/_{9000}$
9. $^{3359}/_{9900}$
10. $^{4624}/_{990}$

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