Converting Repeating Decimals to Fractions

Name:

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

1) $2.2\overline{69}$

2) $0.100\overline{73}$

3) $6.814\overline{4}$

4) $4.70\overline{79}$

5) $2.72\overline{4}$

6) $99.5\overline{84}$

7) $9.577\overline{35}$

8) $0.420\overline{1}$

9) $0.63\overline{83}$

10) $34.4\overline{3}$

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) $2.2\overline{69}$

$f = 2.2\overline{69}$

$1{,}000f = 2269.\overline{69}$

$- \quad 10f = 0022.\overline{69}$

$990f = 2247$

$f = {}^{2247}/_{990}$

2) $0.10\overline{073}$

$f = 0.10\overline{073}$

$100{,}000f = 10073.\overline{73}$

$- \quad 1{,}000f = 00100.\overline{73}$

$99000f = 9973$

$f = {}^{9973}/_{99000}$

3) $6.814\overline{4}$

$f = 6.814\overline{4}$

$10{,}000f = 68144.\overline{4}$

$- \quad 1{,}000f = 06814.\overline{4}$

$9000f = 61330$

$f = {}^{61330}/_{9000}$

4) $4.70\overline{79}$

$f = 4.70\overline{79}$

$10{,}000f = 47079.\overline{79}$

$- \quad 100f = 00470.\overline{79}$

$9900f = 46609$

$f = {}^{46609}/_{9900}$

5) $2.72\overline{4}$

$f = 2.72\overline{4}$

$1{,}000f = 2724.\overline{4}$

$- \quad 100f = 0272.\overline{4}$

$900f = 2452$

$f = {}^{2452}/_{900}$

6) $99.5\overline{84}$

$f = 99.5\overline{84}$

$1{,}000f = 99584.\overline{84}$

$- \quad 10f = 00995.\overline{84}$

$990f = 98589$

$f = {}^{98589}/_{990}$

7) $9.57\overline{735}$

$f = 9.57\overline{735}$

$100{,}000f = 957735.\overline{35}$

$- \quad 1{,}000f = 009577.\overline{35}$

$99000f = 948158$

$f = {}^{948158}/_{99000}$

8) $0.420\overline{1}$

$f = 0.420\overline{1}$

$10{,}000f = 4201.\overline{1}$

$- \quad 1{,}000f = 0420.\overline{1}$

$9000f = 3781$

$f = {}^{3781}/_{9000}$

9) $0.63\overline{83}$

$f = 0.63\overline{83}$

$10{,}000f = 6383.\overline{83}$

$- \quad 100f = 0063.\overline{83}$

$9900f = 6320$

$f = {}^{6320}/_{9900}$

10) $34.4\overline{3}$

$f = 34.4\overline{3}$

$100f = 3443.\overline{3}$

$- \quad 10f = 0344.\overline{3}$

$90f = 3099$

$f = {}^{3099}/_{90}$

Answers

1. $\frac{2{,}247}{990}$
2. $\frac{9{,}973}{99{,}000}$
3. $\frac{61{,}330}{9{,}000}$
4. $\frac{46{,}609}{9{,}900}$
5. $\frac{2{,}452}{900}$
6. $\frac{98{,}589}{990}$
7. $\frac{948{,}158}{99{,}000}$
8. $\frac{3{,}781}{9{,}000}$
9. $\frac{6{,}320}{9{,}900}$
10. $\frac{3{,}099}{90}$

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