Converting Repeating Decimals to Fractions

Name:

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

1) $9.83\overline{2}$

2) $0.689\overline{1}$

3) $28.3\overline{40}$

4) $0.937\overline{95}$

5) $2.46\overline{72}$

6) $55.1\overline{2}$

7) $0.59\overline{1}$

8) $1.117\overline{35}$

9) $6.5\overline{3}$

10) $0.34\overline{84}$

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) $9.83\overline{2}$

$f = 9.83\overline{2}$

$1{,}000f = 9832.\overline{2}$

$- \quad 100f = 0983.\overline{2}$

$900f = 8849$

$f = \frac{8849}{900}$

2) $0.689\overline{1}$

$f = 0.689\overline{1}$

$10{,}000f = 6891.\overline{1}$

$- \quad 1{,}000f = 0689.\overline{1}$

$9000f = 6202$

$f = \frac{6202}{9000}$

3) $28.3\overline{40}$

$f = 28.3\overline{40}$

$1{,}000f = 28340.\overline{40}$

$- \quad 10f = 00283.\overline{40}$

$990f = 28057$

$f = \frac{28057}{990}$

4) $0.93\overline{795}$

$f = 0.93\overline{795}$

$100{,}000f = 93795.\overline{95}$

$- \quad 1{,}000f = 00937.\overline{95}$

$99000f = 92858$

$f = \frac{92858}{99000}$

5) $2.46\overline{72}$

$f = 2.46\overline{72}$

$10{,}000f = 24672.\overline{72}$

$- \quad 100f = 00246.\overline{72}$

$9900f = 24426$

$f = \frac{24426}{9900}$

6) $55.1\overline{2}$

$f = 55.1\overline{2}$

$100f = 5512.\overline{2}$

$- \quad 10f = 0551.\overline{2}$

$90f = 4961$

$f = \frac{4961}{90}$

7) $0.59\overline{1}$

$f = 0.59\overline{1}$

$1{,}000f = 591.\overline{1}$

$- \quad 100f = 059.\overline{1}$

$900f = 532$

$f = \frac{532}{900}$

8) $1.11\overline{735}$

$f = 1.11\overline{735}$

$100{,}000f = 111735.\overline{35}$

$- \quad 1{,}000f = 001117.\overline{35}$

$99000f = 110618$

$f = \frac{110618}{99000}$

9) $6.5\overline{3}$

$f = 6.5\overline{3}$

$100f = 653.\overline{3}$

$- \quad 10f = 065.\overline{3}$

$90f = 588$

$f = \frac{588}{90}$

10) $0.34\overline{84}$

$f = 0.34\overline{84}$

$10{,}000f = 3484.\overline{84}$

$- \quad 100f = 0034.\overline{84}$

$9900f = 3450$

$f = \frac{3450}{9900}$

Answers

1. $\frac{8849}{900}$
2. $\frac{6202}{9000}$
3. $\frac{28057}{990}$
4. $\frac{92858}{99000}$
5. $\frac{24426}{9900}$
6. $\frac{4961}{90}$
7. $\frac{532}{900}$
8. $\frac{110618}{99000}$
9. $\frac{588}{90}$
10. $\frac{3450}{9900}$

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