

Repeating Decimals to Fractions

(1 repeating digit)

1. Find the fraction equal to $0.\bar{5}$.

4. Find the fraction equal to $1.\bar{4}$.

2. Find the fraction equal to $0.\bar{8}$.

5. Find the fraction equal to $2.\bar{3}$.

3. Find the fraction equal to $0.\bar{6}$.

6. Find the fraction equal to $21.\bar{7}$.

Repeating Decimals to Fractions

(1 repeating digit)

1. Find the fraction equal to $0.\bar{5}$.

$$\begin{aligned}x &= 0.\bar{5} \\10x &= 5.\bar{5} \\10x - x &= 5.\bar{5} - 0.\bar{5} \\9x &= 5 \\x &= \frac{5}{9}\end{aligned}$$

2. Find the fraction equal to $0.\bar{8}$.

$$\begin{aligned}x &= 0.\bar{8} \\10x &= 8.\bar{8} \\10x - x &= 8.\bar{8} - 0.\bar{8} \\9x &= 8 \\x &= \frac{8}{9}\end{aligned}$$

3. Find the fraction equal to $0.\bar{6}$.

$$\begin{aligned}x &= 0.\bar{6} \\10x &= 6.\bar{6} \\10x - x &= 6.\bar{6} - 0.\bar{6} \\9x &= 6 \\x &= \frac{6}{9} = \frac{2}{3}\end{aligned}$$

4. Find the fraction equal to $1.\bar{4}$.

$$\begin{aligned}x &= 1.\bar{4} \\10x &= 14.\bar{4} \\10x - x &= 14.\bar{4} - 1.\bar{4} \\9x &= 13 \\x &= \frac{13}{9}\end{aligned}$$

5. Find the fraction equal to $2.\bar{3}$.

$$\begin{aligned}x &= 2.\bar{3} \\10x &= 23.\bar{3} \\10x - x &= 23.\bar{3} - 2.\bar{3} \\9x &= 21 \\x &= \frac{21}{9}\end{aligned}$$

6. Find the fraction equal to $21.\bar{7}$.

$$\begin{aligned}x &= 21.\bar{7} \\10x &= 217.\bar{7} \\10x - x &= 217.\bar{7} - 21.\bar{7} \\9x &= 196 \\x &= \frac{196}{9}\end{aligned}$$