

Name:

ANSWERS!

Class:



Communication



Successful Partnership



Encouragement



Solving Problem Together



Collaboration

Question 01

Part A What is the fraction equivalent to $0.454545454545\dots$ or $0.\overline{45}$?

$$x = 0.\overline{45}$$

$$\begin{array}{r} 100x = 45.4545\dots \\ - x = 0.4545\dots \\ \hline \end{array}$$

$$\begin{array}{r} 99x = 45 \\ \overline{99} \quad \overline{99} \end{array}$$

$$x = \frac{45}{99} \div 9 = \frac{5}{11}$$

Part B What is the fraction equivalent to $0.88888888888888\dots$ or $0.\overline{8}$?

$$x = 0.\overline{8}$$

$$\begin{array}{r} 10x = 8.888\dots \\ - x = 0.888\dots \\ \hline \end{array}$$

$$\begin{array}{r} 9x = 8 \\ \overline{9} \quad \overline{9} \end{array}$$

$$x = \frac{8}{9}$$

Question 02

Part A What is the fraction equivalent to $0.7272727272727272\dots$ or $0.\overline{72}$?

$$\begin{array}{r}
 x = 0.\overline{72} \\
 100x = 72.7272\dots \\
 - x = 0.7272\dots \\
 \hline
 99x = 72 \\
 \overline{99} \quad \overline{99}
 \end{array}
 \qquad
 x = \frac{72}{99} \div 9 = \left(\frac{8}{11} \right)$$

Part B What is the fraction equivalent to $0.5555555555555555\dots$ or $0.\overline{5}$?

$$\begin{array}{r}
 x = 0.\overline{5} \\
 10x = 5.555\dots \\
 - x = 0.555\dots \\
 \hline
 9x = 5 \\
 \overline{9} \quad \overline{9}
 \end{array}
 \qquad
 x = \left(\frac{5}{9} \right)$$

Part C What is the fraction equivalent to $0.1818181818181818\dots$ or $0.\overline{18}$?

$$\begin{array}{r}
 x = 0.\overline{18} \\
 100x = 18.1818\dots \\
 - x = 0.1818\dots \\
 \hline
 99x = 18 \\
 \overline{99} \quad \overline{99}
 \end{array}
 \qquad
 x = \frac{18}{99} \div 9 = \left(\frac{2}{11} \right)$$

Part D What is the fraction equivalent to $0.5333333333333333\dots$ or $0.5\overline{3}$?

$$\begin{array}{r}
 x = 0.5\overline{3} \\
 100x = 53.333\dots \\
 -10x = 5.333\dots \\
 \hline
 90x = 48 \\
 \overline{90} \quad \overline{90}
 \end{array}
 \qquad
 x = \frac{48}{90} \div 2 = \frac{24}{45} \div 3 = \left(\frac{8}{15} \right)$$