Name: _____ Date_____ #50 Decimals to Fractions

Turn each fraction into a correctly written decimal. Identify it as repeating or terminating.

1. $\frac{6}{11} = 0.\overline{54}$
   Repeating

2. $\frac{7}{50} = 0.14$
   Terminating

3. $4\frac{27}{125} = 4.216$
   Terminating

4. $\frac{7}{20} = 0.35$
   Terminating

Show all work to turn each decimal into its fractional equivalent. Remember all fractions should be reduced.

5. 1.76 $1 + \frac{76}{100}$

   $1 + \frac{19}{25}$

   $\frac{25}{25} + \frac{19}{25} = \boxed{\frac{44}{25}}$

6. $0.\overline{15}$ $\frac{15}{100-1}$

   $\frac{15}{99}$

   $\boxed{\frac{5}{33}}$

7. $0.\overline{3}$

   $\frac{3}{10-1}$

   $\frac{3}{9}$ $\boxed{\frac{1}{3}}$

8. $0.\overline{09}$

   $\frac{9}{100-1}$

   $\frac{9}{99}$ $\boxed{\frac{1}{11}}$

9. $0.\overline{7}$

   $\frac{7}{10-1}$ $\boxed{\frac{7}{9}}$

10. $0.\overline{46}$

    $\frac{46}{100-1}$ $\boxed{\frac{46}{99}}$

11. 0.005 $\frac{5}{1000}$ or $\boxed{\frac{1}{200}}$

12. 0.4 $\frac{4}{10}$ or $\boxed{\frac{2}{5}}$

**13. $4.2\overline{3}$

→ can't use shortcut! (work is below) $\boxed{\frac{127}{30}}$

$X = 4.23333\ldots$

$\uparrow$ 10th doesn't repeat so times 10

$\nwarrow$ 100th does repeat so times 100

$\begin{aligned} 100x &= 423.3333\ldots \\ -\quad 10x &= 42.3333\ldots \end{aligned}$

$$\frac{90x}{90} = \frac{381}{90}$$

$X = \dfrac{381}{90}$ share a factor of 3

$\boxed{X = \dfrac{127}{30}}$