2.1 Fractions and Decimals p46

Fractions → Decimals

* divide the numerator by the denominator $\left(\frac{n}{d}\right)$

Terminating Decimals (decimals that end)

1) $\frac{1}{4}$ → king, → peasant

$$\begin{array}{r} 0.25 \\ 4\overline{)1.00} \\ -8 \\ \hline 20 \\ -20 \\ \hline 0 \end{array}$$

0.25

2) $-\frac{1}{8}$

$$\begin{array}{r} 0.125 \\ 8\overline{)1.000} \\ -8 \\ \hline 20 \\ -16 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

-0.125

3) $1\frac{3}{8}$

$$\begin{array}{r} 0.375 \\ 8\overline{)3.000} \\ -24 \\ \hline 60 \\ -56 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

1.375

4) $-2\frac{4}{5}$

$$\begin{array}{r} .8 \\ 5\overline{)4.0} \\ -40 \\ \hline 0 \end{array}$$

-2.8

Repeating Decimals

5) $\frac{1}{3}$

$$3\overline{)1.00}\quad 0.333\ldots$$

-9

10

-9

10

$\boxed{0.\overline{3}}$

* when a decimal repeats, write it ONCE; use Bar notation over the digits that repeat
* if the denominator is a 3, 6, 9, 12 etc. it will be a repeating decimal

$2.3666\ldots = 2.3\overline{6}$

$2.363636\ldots = 2.\overline{36}$

6) $-5\frac{5}{6} =$

$$6\overline{)5.000}\quad .833\ldots$$

-48

20

-18

20

-18

20

$\boxed{-5.8\overline{3}}$

7) $\frac{5}{11}$

$$11\overline{)5.000}\quad 0.4545\ldots$$

-44

60

-55

50

-44

60

$\boxed{0.\overline{45}}$