

Decimals

Number Systems

① Natural number set $\in \mathbb{N} \{1, 2, 3, 4, \dots\}$

② Integers set $\in \mathbb{Z} \{-3, -2, -1, 0, 1, 2, 3\}$

③ Rational numbers $\left. \begin{array}{l} \text{Fractions} \\ \text{Decimals} \end{array} \right\}$ Set of \mathbb{Q}

\rightarrow that terminate - have an end point.

$$\frac{5}{10}$$

Simplify
HCF = 5

$$\frac{1}{2}$$

\Rightarrow decimal

Divide denominator
into the numerator.

$$\begin{array}{r} 2 \overline{) 1.0} \\ \underline{0.5} \\ 0.5 \\ \underline{0.5} \\ 0.0 \\ 0.0 \end{array}$$

$$\frac{1}{2} = 0.5$$

How numbers are represented

Hundreds	Tens	Units	decimal • $1/10$	$1/100$	$1/1000$
100 200 300	10-99	1 → 9	1 → 9	10-99	100 → 200 300

Finding the value of the number

$$\textcircled{1} \quad 2.\underline{7}\textcircled{4} \quad \frac{4}{100}$$

$\frac{7}{10}$

$$\textcircled{4} \quad 13.2\underline{17} \quad \frac{7}{1000}$$

$$\textcircled{2} \quad 12.3\underline{6} \quad \frac{6}{100}$$

$$\textcircled{5} \quad 16.0\underline{73} \quad \frac{7}{100}$$

$$\textcircled{3} \quad 1.\textcircled{2}74$$

$\frac{2}{10}$

$$\textcircled{6} \quad 28.10\underline{9} \quad \frac{9}{1000}$$

Write these numbers as decimals

① four and three tenths 4.3
 $\frac{3}{10}$

② sixteen and seven hundredths 16.07
 $\frac{7}{100}$

③ seventeen hundredths 0.17

Write these decimals as fractions in its simplest form.

$$\textcircled{1} \quad 0.\underline{1} = \frac{1}{10}$$

$$\textcircled{2} \quad 0.\underline{3} = \frac{3}{10}$$

$$\textcircled{3} \quad \underline{8} = \frac{8}{10} \quad \text{HCF } 2 = \frac{4}{5}$$

$$\textcircled{4} \quad \underline{6} = \frac{6}{10} \quad \text{HCF } 2 = \frac{3}{5}$$

Write these decimals as fractions and simplify

$$\textcircled{1} \cdot 25 = \frac{25}{100} \quad \text{HCF } 25 = \frac{1}{4}$$

$$\textcircled{2} \cdot 75 = \frac{75}{100} \quad \text{HCF } 25 = \frac{3}{4}$$

$$\textcircled{3} \cdot 28 = \frac{28}{100} \quad \text{HCF } 4 = \frac{7}{25}$$

$$\textcircled{4} \cdot 05 = \frac{5}{100} \quad \text{HCF } 5 = \frac{1}{20}$$

$$\textcircled{5} \cdot 08 = \frac{8}{100} \quad \text{HCF } 4 = \frac{2}{25}$$

Decimals on number lines



ADDING DECIMAL

Method: Line up the decimal points
Add the numbers / Start

Eg 1 $12.24 + 6.72 + 14.4$

Fill in ZERO for missing numbers

$$\begin{array}{r} 12.24 \\ 16.72 \\ + 14.40 \\ \hline \text{Ans } 33.36 \end{array}$$

Subtracting Decimals

Method = line up the decimal point
subtract the numbers

Eg 1) $18.4 - 3.8$

$$\begin{array}{r} 18.4 \\ - 03.8 \\ \hline \end{array}$$

Ans = 14.6

(Note: In the original image, a circled '1' is written above the 4 in 18.4, with an arrow pointing to the 4. Another arrow points from the 4 to the 8 in the second number. A third arrow points from the 8 to the 6 in the answer.)

Classwork

Pg 104

Q 7

Q 8

Q 9

Q 10

Pg 105

Q 11 \rightarrow 18