

For ch 4

Have the following memorized

$$\textcircled{1} 0.1 = \frac{1}{10}$$

$$0.2 = \frac{2}{10} = \frac{1}{5}$$

$$0.3 = \frac{3}{10}$$

$$0.4 = \frac{4}{10} = \frac{2}{5}$$

$$0.5 = \frac{1}{2} \left(\frac{5}{10} \right)$$

$$0.6 = \frac{6}{10} = \frac{3}{5}$$

$$0.7 = \frac{7}{10}$$

$$0.8 = \frac{8}{10} = \frac{4}{5}$$

$$0.9 = \frac{9}{10}$$

$$\textcircled{2} 0.01 = \frac{1}{100}$$

$$0.02 = \frac{2}{100} = \frac{1}{50}$$

etc.

$$\textcircled{3} .25 = \frac{1}{4}$$

$$.75 = \frac{3}{4}$$

$$1.25 = \frac{5}{4} \text{ (5 quarters)}$$

$$1.75 = \frac{7}{4}$$

$$\textcircled{4} \frac{3}{2} = 1.5$$

$$\frac{5}{2} = 2.5$$

$$\frac{7}{2} = 3.5$$

etc.

$$\textcircled{5} 1\frac{1}{2} = \frac{3}{2} \leftarrow 2 \times 1 + 1$$

$$2\frac{3}{4} = \frac{11}{4} \leftarrow 2 \times 4 + 3$$

$$-1\frac{1}{5} = -\frac{6}{5} \leftarrow 5 \times 1 + 1$$

Math 10

Memorize!

$$\sqrt{4} = 2 \quad \sqrt{49} = 7 \quad \sqrt{144} = 12$$

$$\sqrt{9} = 3 \quad \sqrt{64} = 8 \quad \sqrt{169} = 13$$

$$\sqrt{16} = 4 \quad \sqrt{81} = 9 \quad \sqrt{196} = 14$$

$$\sqrt{25} = 5 \quad \sqrt{100} = 10 \quad \sqrt{225} = 15$$

$$\sqrt{36} = 6 \quad \sqrt{121} = 11$$

$$\sqrt[3]{8} = 2$$

$$\sqrt[4]{16} = 2$$

$$\sqrt[5]{32} = 2$$

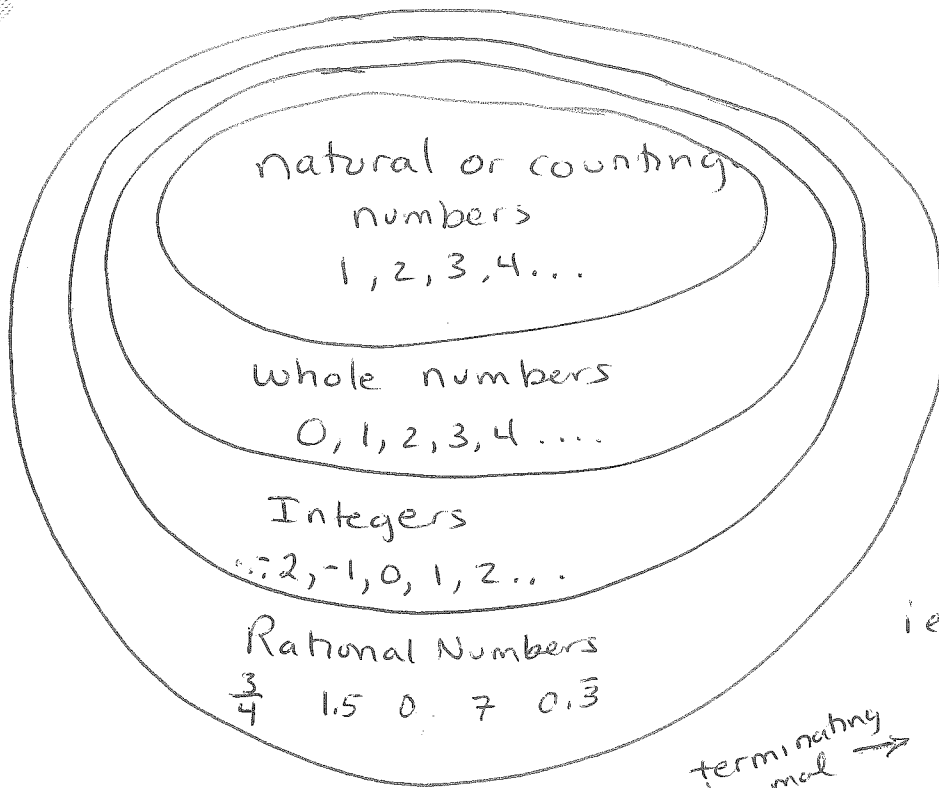
$$\sqrt[3]{27} = 3$$

$$\sqrt[4]{81} = 3$$

$$\sqrt[3]{64} = 4$$

$$\sqrt[3]{125} = 5$$

15) The Number System - Definition

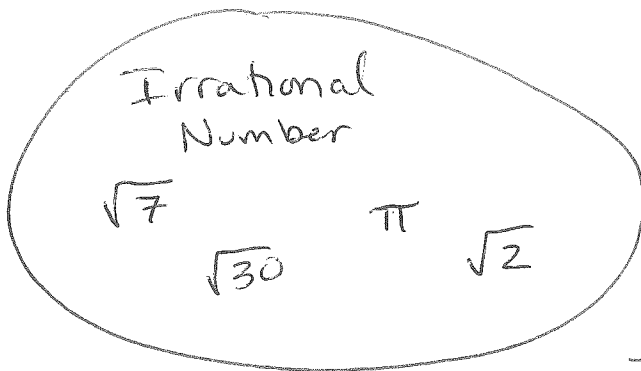


Rational Numbers are any number that can be made into a ratio

ie $5 = \frac{5}{1}$ ratio

terminating decimal $\rightarrow 0.25 = \frac{25}{100} = \frac{1}{4}$

repeating decimal $\rightarrow 0.\bar{3} = \frac{1}{3}$



Irrational Numbers cannot be written as ratio.

They can't be written in full decimal form because the decimals go on and on forever and ever and never repeat

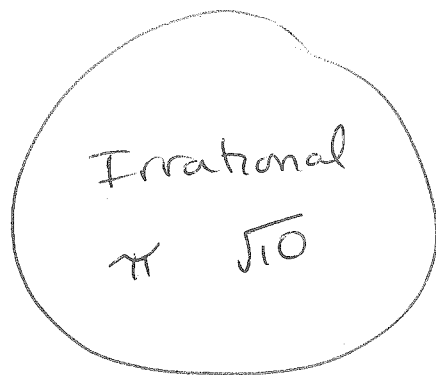
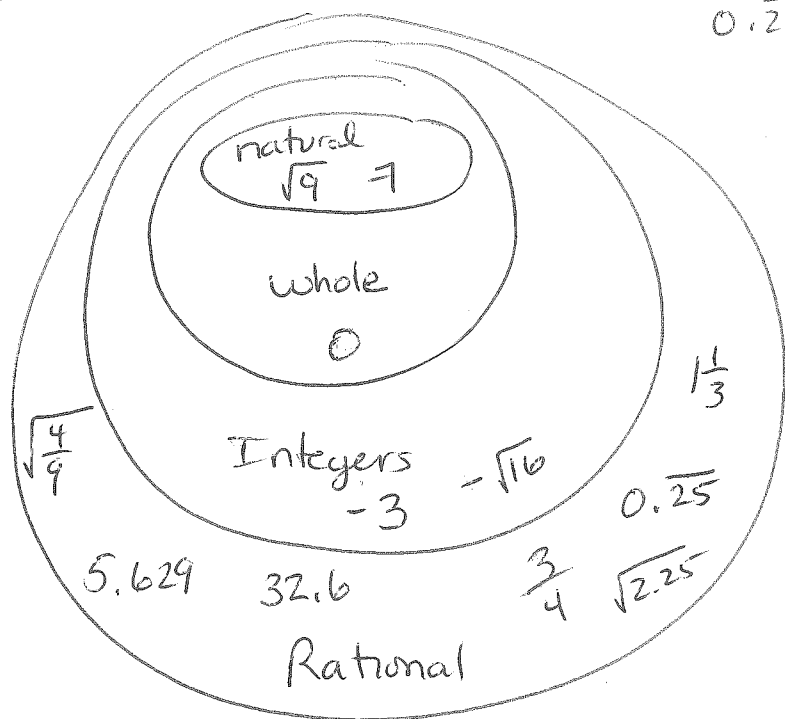
$0.2397148231956\dots$
is probably irrational. But we can't tell what happens after 6... Maybe it goes on for ever, maybe it terminates

15 cont.

ex1

Place these numbers in the inner most circle

π , $\sqrt{9}$, 0, 32.6, $\frac{3}{4}$, -3, 7, $\sqrt{10}$, 5.629, $-\sqrt{16}$
 $0.\overline{25}$, $1\frac{1}{3}$, $\sqrt{2.25}$, $\sqrt{\frac{4}{9}}$



Note: $\sqrt{2.25} = 1.5$

and $\sqrt{\frac{4}{9}} = \frac{2}{3}$

ex2

Write $\frac{4}{9}$ as a square root

answer $\frac{4}{9} \times \frac{4}{9} = \frac{16}{81}$ so $\sqrt{\frac{16}{81}}$ is $\frac{4}{9}$ as a square root