

3 - 4

Real Number Properties

(N) Natural: $1, 2, 3, 4, \dots$

(W) Whole: $0, 1, 2, 3, \dots$

(Z) Integers: $\dots -2, -1, 0, 1, 2, \dots$

(Q) Rational: any number that can be written as a fraction

* decimals that stop or repeat

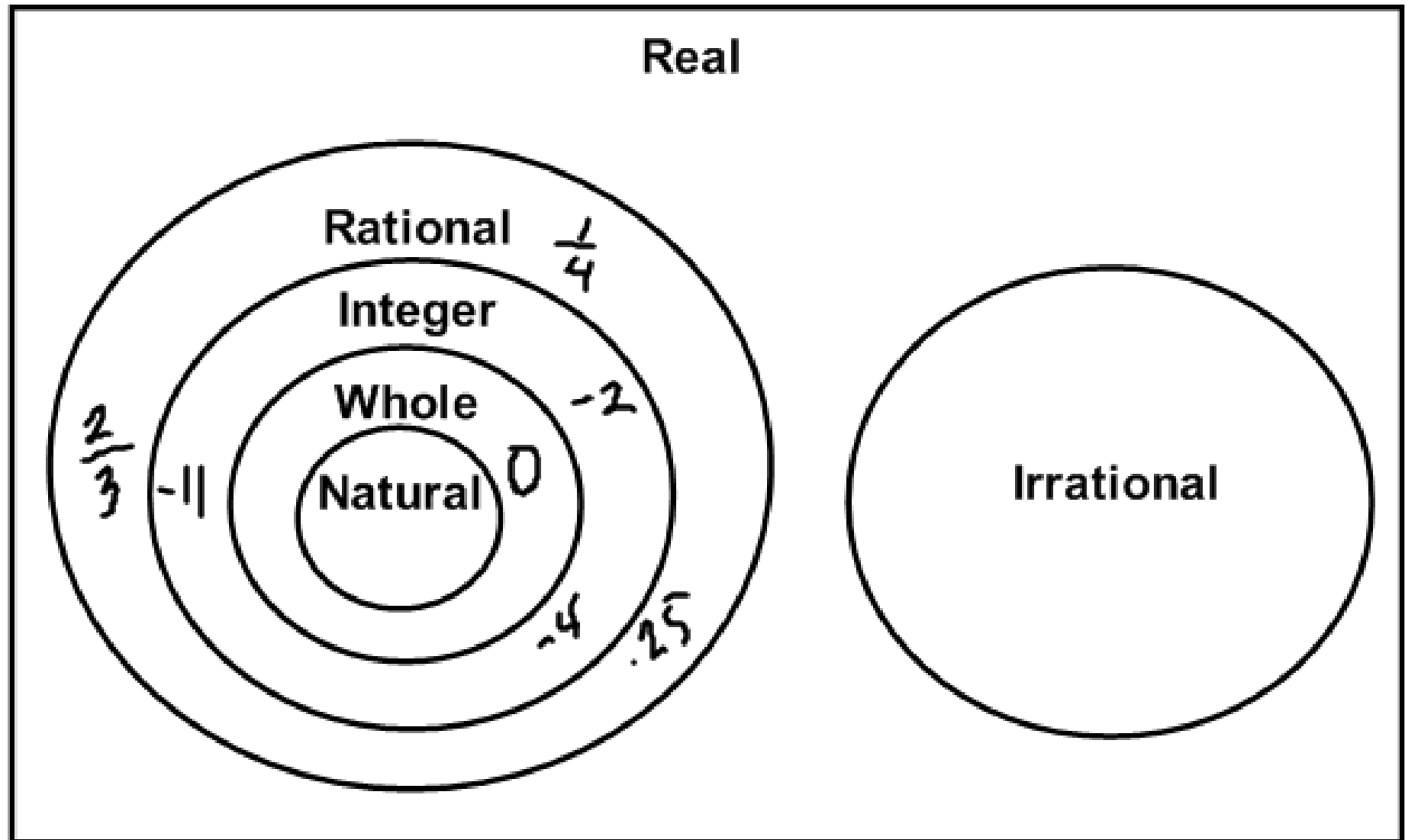
$7, -2, \frac{1}{4}, \frac{2}{5}, .3614, .232323\dots$

(I) Irrational: can't be written as
fractions / decimals that never
end and never repeat

↑ $3.1415926\dots$

$.010010001\dots$

All of these are real numbers!



Ex: -15 \mathbb{Z}, \mathbb{Q}

$\mathbb{N} \subset \mathbb{W} \subset \mathbb{Z} \subset \mathbb{Q}$

Ex: 2 $\mathbb{N}, \mathbb{W}, \mathbb{Z}, \mathbb{Q}$

$\mathbb{W} \subset \mathbb{Z} \subset \mathbb{Q}$

Ex: $\frac{1}{4}$ \mathbb{Q}

$\mathbb{Z} \subset \mathbb{Q}$

\mathbb{Q}

\mathbb{I}

Ex: .01010101... \mathbb{Q}

Ex: 3.14159265389... \mathbb{I}

Ex: 4.23 \mathbb{Q}



Homework:

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