Algebra 2

REAL NUMBERS SORT & MATCH ACTIVITY

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FLAMINGO MATH

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REAL NUMBERS SORT & MATCH ACTIVITY

This activity has 72 cards meant for the beginning unit in Algebra 2. In this activity, students will determine the appropriate classification of numbers. The activity is meant for Algebra students of all levels.
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Teaching Suggestions:

- Use the set as an open sort or closed sort in groups
- Use the cards as a relay activity
- Use the set as a review prior to assessing students

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REAL NUMBERS – Sort and Match

In this activity, students will determine the appropriate classification of numbers. The activity is meant for Algebra students of all levels.

TEACHER DIRECTIONS:

Create the six sets of twelve cards on different colors of card stock. Cut them out and laminate each set. If you use the cards in a relay race setting, you will need six small paper lunch-size bags. Label each bag with a large permanent marker as indicated below:

N= Natural numbers; W = Whole numbers; I = Integers; Q = Rational numbers; R = Real Numbers; Ir = Irrational numbers ; $\not{R}$ = Not real					
BAG 1	**BAG 2**	**BAG 3**	**BAG 4**	**BAG 5**	**BAG 6**
N W I Q R	W I Q R	I Q R	Q R	Ir R	$\not{R}$

OPEN SORT:

You can have students create **Open Sorts**. Students work in groups to determine how to sort the cards based on characteristics that they choose. When students create categories, recommend that they create categories that will have at least 3 cards in each, when possible. Then, supply some blank cards and have students create an additional card or two for each category. This will let you know that the group can demonstrate an understanding of the characteristics they have named.

CLOSED SORT:

In a **Closed Sort**, the teacher determines the categories**.** Here are several suggestions for ways students can sort the set.

- Rational numbers vs. Irrational numbers
- Integers vs. non-integers
- For rational numbers, those that are represented by terminating decimals vs. those that are represented by repeating decimals
- Numbers that are between 0 and 1 vs. numbers that are between 0 and – 1
- Equivalent sets of numbers
- Sets of numbers with the same absolute value.

EXTENSION:

Opportunities for discussion using card sets can include

- divisibility tests for 3, 6, and 9
- distinguish between repeating decimals and repeating patterns

RELAY GAME:

1. Tape the labeled paper bags to the chalkboard or whiteboard.
2. Place a set of cards face down on the desk at the front of team.
3. When signaled to begin, the first person in each team draws the top card and places his or her card in the bag that correctly defines their chosen number.
4. Play continues to the second person, repeating step 3 until all cards are placed.
5. The winning team would be the team with the most correct cards in each bag.

N, W, I, Q, R	W, I, Q, R	I, Q, R	Q, R	Ir, R	Not Real
$483, \frac{57}{3}$	0	$-\sqrt{25}, -23, -\frac{96}{6}$	$5\frac{1}{6}, 0.6\overline{3}$	$\sqrt{18}, \pi,$ 0.14144 ...,	$\sqrt{-25}$
$491, \frac{51}{3}$	0	$-\sqrt{64}, -17, -\frac{90}{6}$	$3\frac{1}{6}, 0.1\overline{3}$	$\sqrt{20}, \pi,$ 0.09099 ...	$\sqrt{-64}$
$493, \frac{72}{3}$	0	$-\sqrt{49}, -13, -\frac{78}{6}$	$2\frac{5}{6}, 0.5\overline{3}$	$\sqrt{10}, \pi,$ 0.27277 ...	$\sqrt{-49}$
$489, \frac{54}{3}$	0	$-\sqrt{16}, -19, -\frac{84}{6}$	$4\frac{1}{6}, 0.8\overline{2}$	$\sqrt{24}, \pi,$ 0.21221 ...	$\sqrt{-16}$
$497, \frac{75}{3}$	0	$-\sqrt{81}, -11, -\frac{72}{6}$	$1\frac{5}{6}, 0.8\overline{2}$	$\sqrt{50}, \pi,$ 0.10110 ...	$\sqrt{-81}$
$487, \frac{78}{3}$	0	$-\sqrt{36}, -29 -\frac{102}{6}$	$4\frac{5}{6}, 0.4\overline{8}$	$\sqrt{30}, \pi,$ 0.07077 ...	$\sqrt{-36}$

CARD SET #1

483	$\frac{57}{3}$	0
$\sqrt{18}$	$-\sqrt{25}$	-23
π	$0.14144\ldots$	$0.6\overline{3}$
$5\frac{1}{6}$	$-\frac{96}{6}$	$\sqrt{-25}$

CARD SET #2

491	$\frac{51}{3}$	0
$\sqrt{20}$	$-\sqrt{64}$	-17
π	$0.09099\ldots$	$0.1\overline{3}$
$3\frac{1}{6}$	$-\frac{90}{6}$	$\sqrt{-64}$

CARD SET #3

493	$\frac{72}{3}$	0
$\sqrt{10}$	$-\sqrt{49}$	-13
π	$0.27277\ldots$	$0.5\overline{3}$
$2\frac{5}{6}$	$-\frac{78}{6}$	$\sqrt{-49}$

CARD SET #4

489	$\frac{54}{3}$	0
$\sqrt{24}$	$-\sqrt{16}$	-19
π	$0.21221\ldots$	$0.8\overline{2}$
$4\frac{1}{6}$	$-\frac{84}{6}$	$\sqrt{-16}$

CARD SET #5

497	$\frac{75}{3}$	0
$\sqrt{50}$	$-\sqrt{81}$	-11
π	$0.10110\ldots$	$0.3\overline{6}$
$1\frac{5}{6}$	$-\frac{72}{6}$	$\sqrt{-81}$

CARD SET #6

487	$\frac{78}{3}$	0
$\sqrt{30}$	$-\sqrt{36}$	-29
π	$0.07077\ldots$	$0.4\overline{8}$
$4\frac{5}{6}$	$-\frac{102}{6}$	$\sqrt{-36}$