

# Magnitude Madness

**This game is for 2 players.**

**Materials:** set of Cut-Out Cards, table, number lines

## Instructions

**Step 1** Ask your teacher for a copy of the table and the number lines shown on the back of this card.

**Step 2** Get a game card from your teacher. Cards contain either a number or a real-world situation. Search the room to find the person with the real-world situation or number that matches your card.

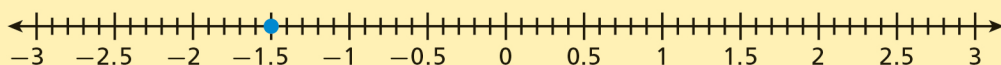
−1.5

The interest rate  
dropped 1.5%.

**Step 3** Once you and your partner have found each other, fill in a row of your table using the information from your cards.

Number	Absolute Value (Magnitude)	Distance from 0 on the Number Line	Real-World Situation
−1.5	1.5	1.5	The interest rate dropped 1.5%.

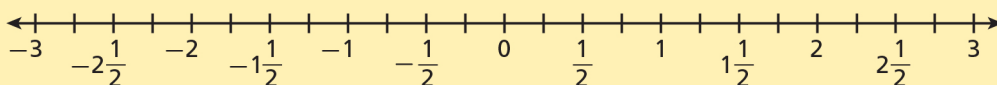
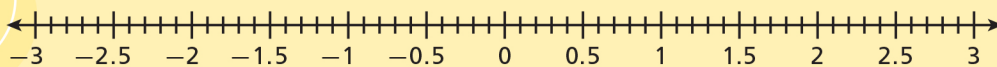
**Step 4** Plot the number on the appropriate number line below your table. Make sure your number line graph agrees with your partner's graph.



**Step 5** Turn your cards back in to your teacher, who will shuffle them and then give each of you a new card so that you may repeat Steps 2–4.

**Step 6** Once you have filled in all the rows in your table, answer the Reflect questions on the back of this card.

Number	Absolute Value (Magnitude)	Distance from 0 on the Number Line	Real-World Situation



## Reflect

1. What relationship do you see between the absolute value (magnitude) of a number and the distance a number is from 0 on a number line?
2. What relationship do you see between a number and its absolute value (magnitude)?

## Cut-Out Cards

**$-1$**

**$1$**

**The temperature  
went up  $2\frac{1}{2}^{\circ}$  F.**

**$\frac{3}{4}$**

**The price went  
down \$2.20.**

**$-1.3$**

**He lost  $1\frac{3}{4}$  yards  
on the play.**

**I saved \$1.70 on a  
gallon of milk using  
a coupon.**

## Cut-Out Cards

The store is  
1.3 miles away.

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

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

Her report is  
 $\frac{3}{4}$  page long.

The water level  
went down 0.3 inch.

The book is 1 inch thick.

$$0.3$$

$$-2$$

## Cut-Out Cards

**1.3**

**Today, 0.3 inch  
of rain fell.**

**The cost of each cup  
was \$0.10.**

**−2.2**

**He lost \$1.00  
in the park.**

**We lost 2 marbles.**

**$2\frac{3}{4}$**

**The room has 3 doors.**

## Cut-Out Cards

I was 1.3 feet  
below sea level.

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

$$3$$

$$-2.7$$

$$1.7$$

There are  $2\frac{3}{4}$  cups  
of water.

$$-0.1$$

$$-0.3$$

## Cut-Out Cards

There are  $1\frac{1}{2}$  bags  
of apples left.

0.1

We lost 0.1 of the  
harvest due to hail.

We are \$2.70 short of  
reaching the goal.

$-1.7$

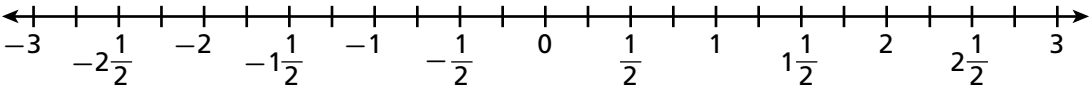
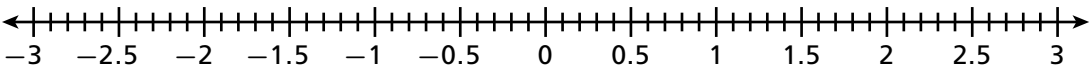
The temperature  
went down  $2\frac{1}{2}^{\circ}\text{F}$ .

$-1\frac{3}{4}$

The eraser is  
1.7 inches long.

# Table and Number Lines

Number	Absolute Value (Magnitude)	Distance from 0 on the Number Line	Real-World Situation

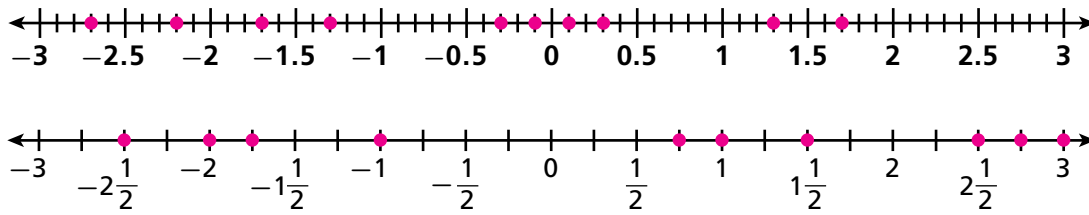




## Answer Key

Value	Absolute Value (Magnitude)	Distance from 0 on the Number Line	Real-World Situation
3	3	3	The room has 3 doors.
$2\frac{3}{4}$	$2\frac{3}{4}$	$2\frac{3}{4}$	There are $2\frac{3}{4}$ cups of water.
$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	The temperature went up $2\frac{1}{2}^{\circ}$ F.
1.7	1.7	1.7	The eraser is 1.7 inches long.
$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	There are $1\frac{1}{2}$ bags of apples left.
1.3	1.3	1.3	The store is 1.3 miles away.
1	1	1	The book is 1 inch thick.
$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	Her report is $\frac{3}{4}$ page long.
0.3	0.3	0.3	Today, 0.3 inch of rain fell.
0.1	0.1	0.1	The cost of each cup was \$0.10.
-0.1	0.1	0.1	We lost 0.1 of the harvest due to hail.
-0.3	0.3	0.3	The water level went down 0.3 inch.
-1	1	1	He lost \$1.00 in the park.
-1.3	1.3	1.3	I was 1.3 feet below sea level.
-1.7	1.7	1.7	I saved \$1.70 on a gallon of milk using a coupon.
$-1\frac{3}{4}$	$1\frac{3}{4}$	$1\frac{3}{4}$	He lost $1\frac{3}{4}$ yards on the play.
-2	2	2	We lost 2 marbles.
-2.2	2.2	2.2	The price went down \$2.20.
$-2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	The temperature went down $2\frac{1}{2}^{\circ}$ F.
-2.7	2.7	2.7	We are \$2.70 short of reaching the goal.

## Answer Key



## Reflect

### Question 1

Sample answer: The absolute value (magnitude) and distance of a number from 0 on a number line are equal.

### Question 2

Sample answer: The absolute value (magnitude) is always positive. If the number is positive, its absolute value (magnitude) is the same as the number. If the number is negative, its absolute value (magnitude) is the opposite of the number.