



# Unit 1

# The Number System

Interactive Notebook

**Comparing Irrational  
Numbers**

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**YOUR TURN**

The Number System  
(Comparing Irrational Numbers)

On a rating of 1-5, how comfortable  
are you with this concept?  
(5 is the highest)

1 2 3 4 5

$\sqrt{26}$

$\sqrt{32}$

Show your work below:

$\sqrt{10}$

$\frac{9}{4}$

Show your work below:

$1.\bar{5}$

$\sqrt{3}$

Show your work below:

$\sqrt{99}$

$9\frac{3}{5}$

Show your work below:

Reflection: I learned...

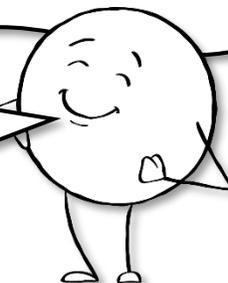
# The Number System

(Comparing Irrational Numbers)

I can compare irrational numbers  
using the inequalities < and >.

What does it mean to compare?

When you compare two values you are determining if one is greater or less than another!



Before we compare two values, we need to remember how to change the following to decimals:

1	2	3	4
$\frac{9}{2}$	$3\frac{7}{8}$	$2.\overline{43}$	$\sqrt{5}$
4.5	3.875	2.4343...	2.236...

Example:

Now we can compare the following two values using < or >.

$\sqrt{15}$	and	$\frac{7}{2}$
$\approx 3.9$	$>$	3.5

Hence,  $\sqrt{15}$  is greater than  $\frac{7}{2}$ .

YOUR TURN

The Number System  
(Comparing Irrational Numbers)

On a rating of 1-5, how comfortable  
are you with this concept?  
(5 is the highest)

1 2 3 4 5

$\sqrt{26}$

<

$\sqrt{32}$

Show your work below:

$$\sqrt{26} = 5.09901... \approx 5.1$$

$$\sqrt{32} = 5.65685... \approx 5.7$$

$\sqrt{10}$

>

$\frac{9}{4}$

Show your work below:

$$\sqrt{10} = 3.16227... \approx 3.2$$

$$\frac{9}{4} = 2\frac{1}{4} = 2.25$$

$1.\bar{5}$

<

$\sqrt{3}$

Show your work below:

$$1.\bar{5} = 1.55555...$$

$$\sqrt{3} = 1.73205... \approx 1.7$$

$\sqrt{99}$

>

$9\frac{3}{5}$

Show your work below:

$$\sqrt{99} = 9.94987... \approx 9.9$$

$$9\frac{3}{5} = 9.6$$

Reflection: I learned...

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