

Properties of Real Numbers		
Property	Addition	Multiplication
Commutative Property	$a + b = b + a$	$a \cdot b = b \cdot a$
Associative Property	$a + (b + c) = (a + b) + c$	$a \cdot (b \cdot c) = (a \cdot b) \cdot c$
Distributive Property	$a \cdot (b + c) = a \cdot b + a \cdot c$	
Identity Property	$a + 0 = a$	$a \cdot 1 = a$
Inverse Property	$a + (-a) = 0$	$a \cdot \frac{1}{a} = 1$

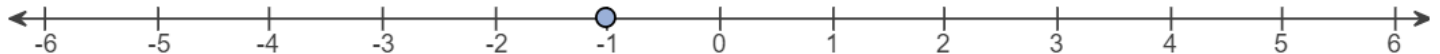
EXAMPLE PROBLEMS

- 1) Plot the following numbers on the number line.

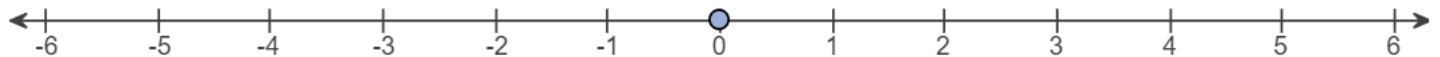
- 1, 0, 3

...

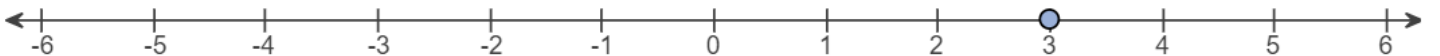
Plot - 1.



Plot 0.



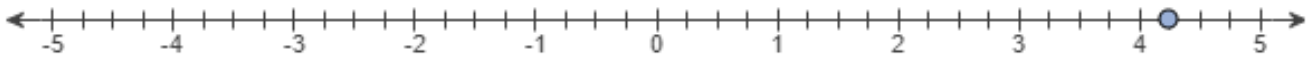
Plot 3.



- 2) Graph the real number on the number line. 4 then 1 out of 4 units past 4

$$4\frac{1}{4}$$

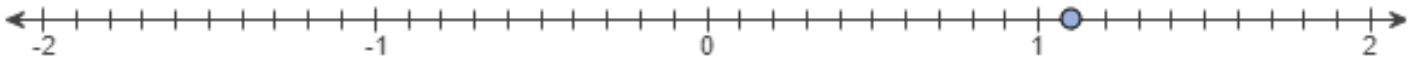
Graph $4\frac{1}{4}$ on the number line.



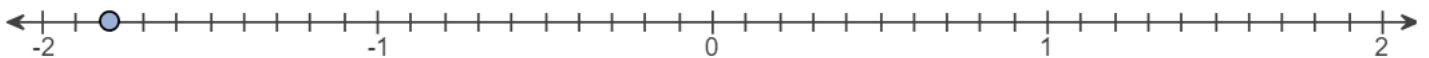
- 3) Graph the number on a number line. 1 then 1 out of 10 units past 1

$$1.1$$

Graph 1.1 on the number line.



- 4) Graph -1.8 on the number line.



- 5) Insert either $<$ or $>$ between the pair of numbers to make a true statement.

$\sqrt{7}$ 2.2 Change square root into a decimal

$2.5 > 2.2$

- 6) State the name of the property illustrated.

$$\sqrt{7} + \sqrt{2} = \sqrt{2} + \sqrt{7}$$

Commutative and addition

Choose the correct answer below.

- Distributive property
- Commutative property of addition
- Commutative property of multiplication
- Associative property of addition
- Associative property of multiplication

7) Choose the property that justifies the following statement.

$$\frac{1}{5} \cdot 5 = 1$$

- commutative property of multiplication
- distributive property of multiplication over addition
- identity property of multiplication
- inverse property of multiplication

Inverse property equals 1 or 0

Identity property equals itself