Domain #2: The Number System

(Relevant Units: Unit 2 – Integers,   Unit 4 – Coordinate System,
Unit 7 – Rational Numbers,   Unit 8 – Decimals   )

1.

Consider the inequality $x > 7$.

Determine whether each value of x shown in the table makes this inequality true. Select Yes or No for each value.

	Yes	No
22	☐	☐
-7	☐	☐
13	☐	☐
5	☐	☐
-39	☐	☐

2.

Divide.

$16,536 \div 24$

Enter the quotient.

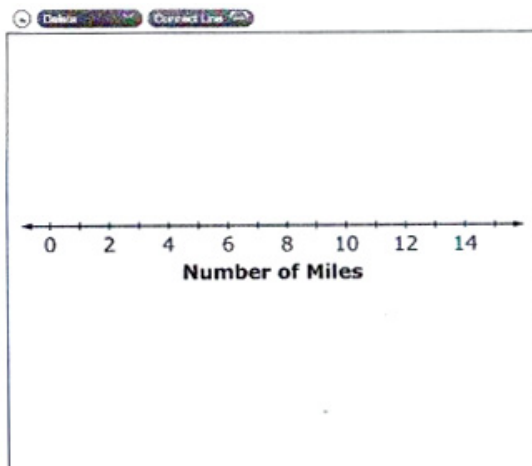| 1	2	3
4	5	6
7	8	9
0	.	-

3.

A boat takes 3 hours to reach an island 15 miles away.

The boat travels:
- at least 1 mile but no more than 6 miles during the first hour
- at least 2 miles during the second hour
- exactly 5 miles during the third hour

Use the Connect Line tool to show the range of miles the boat could have traveled during the **second** hour, given the conditions above.
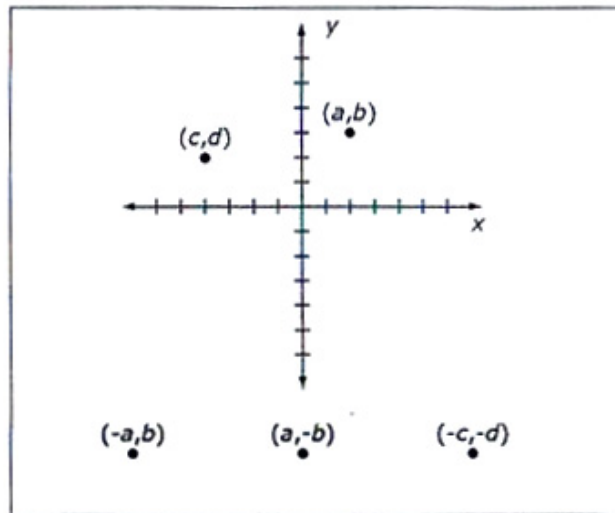

Number of Miles

4.

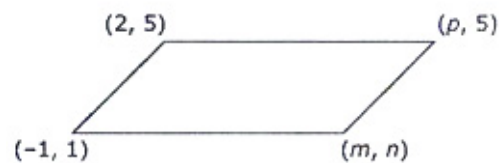Two ordered pairs are shown on a coordinate grid.

Drag each ordered pair to its correct location on the coordinate grid.

- $(-a, b)$
- $(a, -b)$
- $(-c, -d)$

5.

The coordinates of this parallelogram are given.

Determine if each statement is True or False.

	True	False
The length of the longer side is $p - 2$.	☐	☐
The length of the longer side is $n + 1$.	☐	☐
The short side is 4 units in length.	☐	☐
$n = 5$	☐	☐
$m > n$	☐	☐
$p = 2$	☐	☐

6.

Select the value that completes this expression for converting 10 yards to inches.

$$\left(\frac{10\ yards}{1}\right)\left(\Box\right)\left(\frac{12\ inches}{1\ foot}\right)$$

(A) $\dfrac{1\ yard}{36\ inches}$

(B) $\dfrac{3\ feet}{1\ yard}$

(C) $\dfrac{360\ inches}{10\ yards}$

(D) $\dfrac{120\ feet}{10\ inches}$

7.

Look at the equation.

$$\frac{2}{3} \times \frac{\Box}{\Box} = n$$

Sarah claims that for any fraction multiplied by $\frac{2}{3}$, n will be less than $\frac{2}{3}$.

To convince Sarah that this statement is only sometimes true:

Part A: Drag one number into each box so the product, n, is less than $\frac{2}{3}$.

Part B: Drag one number into each box so the product, n, is **not** less than $\frac{2}{3}$.

| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |
| 8 |
| 9 |

Delete

Part A: Product n is less than $\frac{2}{3}$

$$\frac{2}{3} \times \frac{\Box}{\Box} = n$$

Part B: Product n is not less than $\frac{2}{3}$

$$\frac{2}{3} \times \frac{\Box}{\Box} = n$$

8.

Let n be an integer. Tracy claims that $-n$ must be less than 0. To convince Tracy that his statement is only sometimes true:
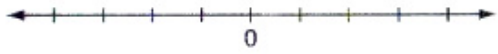
Part A:
Drag n to the number line so that the value of $-n$ is less than 0.

Part B:
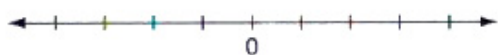Drag n to the number line so that the value of $-n$ is greater than 0.

n
•

Delete

Part A:

Value of $-n$ is less than 0

0

Part B:

Value of $-n$ is greater than 0

0