MATH: UNIT VOCABULARY

Rational Exploration: Numbers and Their Opposites

NAME:_____



CHART

| TERM | NFORMATION | PICTURE |
|----------------------------|--|--|
| Absolute value | The distance between a number and zero on the number line. The symbol for absolute value is shown in the equation $ -8 = 8$. | $\begin{array}{c} 3 \\ \hline \\ -3 \\ \hline \\ \end{array}$ |
| Cartesian Coordinate Plane | A plane containing two perpendicular axes (x and y) intersecting at a point called origin (0, 0). | y-axis |
| Coordinates | An ordered pair, (x, y) , that locates a point in a plane. | Y-axis Y-axis Y-axis X-axis X-axis |
| Distance | Amount of separation between 2 points. | Y. (7,8) (3,2) |
| Inequality | Any mathematical sentence that contains the symbols > (greater than), < (less than), < (less than or equal to), or > (greater than or equal to). | $x > -21 \qquad x \le -3 \qquad x \ge 5 \qquad x < 7$ |
| Integers | The set of whole numbers and their opposites { − 3, −2, −1, 0, 1, 2, 3, } | Negative direction Positive direction |

| Magnitude Negative numbers | Greatness in size or amount | magnitude sense initial point direction negative Z positive |
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| | value less than zero | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ |
| Opposite number | Two different numbers that have the same absolute value. Example: 4 and –4 are opposite numbers because both have an absolute value of 4. They are the same distance from zero, in opposite directions. | Opposites -4 -3 -2 -1 0 1 2 3 4 Opposite numbers are the same distance from zero. The opposite of -2 is 2. The sum of opposites is 0. |
| Ordered Pair | A pair of numbers, (<i>x</i> , <i>y</i>), that indicate the position of a point on the Cartesian coordinate Plane. | Ordered Pair (X, V) (X-value Y-value or or x-coordinate , y-coordinate) |
| Origin | The point of intersection of the vertical and horizontal axes of a Cartesian coordinate plane. The coordinates of the origin are (0, 0). | Y-axis Y-axis X-axis |
| Polygon | A closed figure formed by three or more line segments. | regular polygons triangle 3 sides triangle quadrilateral quadrilateral sides pentagon 5 sides pentagon 6 sides hexagon 6 sides hexagon 6 sides hexagon 10 sides |
| Positive number | The set of numbers whose value is greater than zero. | negative numbers r -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 |

| Quadrant | One of the four regions on a Coordinate plane formed by the intersection of the x-axis and the y-axis. | Quadrant II (-,+) Quadrant I (+,+) Quadrant II (+,-) Quadrant III Quadrant IV |
|-----------------|---|---|
| Rational number | The set of numbers that can be written in the form a/b where a and b are integers and $b \neq 0$. | What is a rational number? $\begin{array}{c} \underline{a} & \text{integers} \\ \underline{b} & \underline{b} \neq 0 \end{array}$ Rational Number: 5 $-1\frac{2}{5}$ 0.25 0.666 $\downarrow \downarrow \downarrow \downarrow$ Fractional Form: $\frac{5}{1} -\frac{7}{5} \frac{1}{4}$ |
| Sign | A symbol that indicates whether a number is positive or negative. Example: in –4, the (–) sign how this number is read "negative four". | $\begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$ |
| x-axis | The horizontal number line on the Cartesian coordinate plane. | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ |
| x-coordinate | The first number of in ordered pair; the position of a point relative to the vertical axis. | x-coordinate x-coordinate y-coordinate y-coordinate y-coordinate |
| y-axis | The vertical number line on the Cartesian coordinate plane | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ |
| y-coordinate | The second number in an ordered pair; the position of a point relative to the horizontal axis | $\begin{array}{c} x \\ y \\ z \\ - \\ 1 \\ - \\ 0 \\ 1 \\ 2 \\ 3 \\ 4 \\ x - axis \end{array}$ |