

The Equation of a Ray (End-Point Not Included)

In Graph 1 (below) a horizontal ray is shown but rather than having a closed circle as an end-point, it has an open circle. This open circle means that the end-point is not included as part of the ray. To obtain an equation for this ray, we follow the same steps as when the end-point is included, but we have to change the inequality.

Step 1

Find the equation of the corresponding line:

$$y = 4$$

Step 2

Find the inequality that describes the valid x -values. The valid x values are all values greater than (but not equal to!)

-2 . We can write this as:

$$x > -2$$

Step 3

Put the equation and inequality together into a single statement:

$$y = 4 \text{ and } x > -2$$

