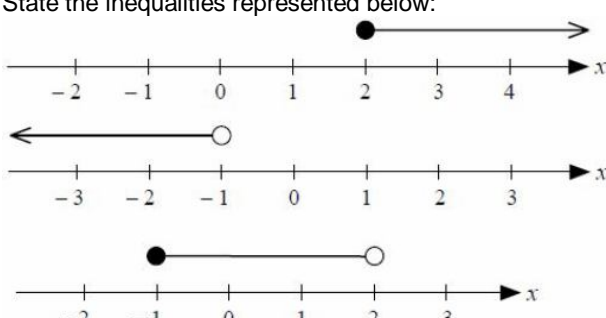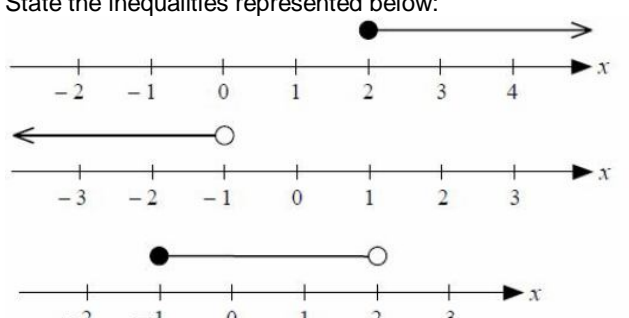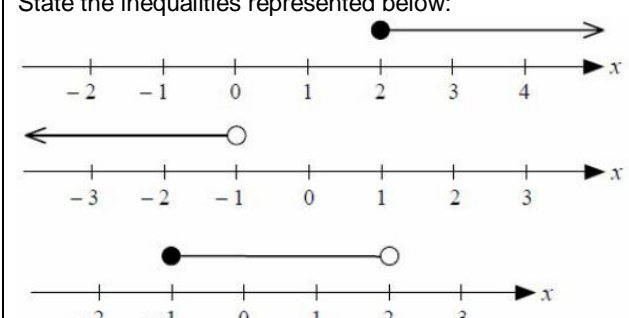Inequalities   Name_____

List 3 integers that satisfy the following inequalities:

$x > 5$

$3 < x$

$-5 \le x$

$5 < x < 10$

$-1 \le x < 5$

List **all** the integers that satisfy the following inequalities:

$4 < x < 8$

$-2 \le x < 4$

$-5 < x < 1$

$8 \le x \le 10$

$-4 \le 4x < 16$

$3 \le \frac{1}{2} x < 5$

$2 < -x < 7$

List 3 integers that satisfy BOTH inequalities

$x > -5$ AND $3x < 6$

List 3 integers that satisfy BOTH inequalities

$x \le -5$ AND $-10 < x < 6$

List all the integers that satisfy BOTH inequalities

$x > -1$ AND $-5 < x \le 9$

Solve the following inequalities:

$3x > 9$

$2x + 2 < 8$

$5x - 1 > 9$

$3x - 1 < 2x + 4$

$5x + 3 \le 7x - 11$

$3(x+3) \ge 12$

Write these as inequalities:

(A) x is larger than 2 but less or equal to 6

(B) y is a number smaller than minus one yet greater than -7

State the inequalities represented below:

Represent the following inequalities on a number line:

$x > 2$

$1 < x$

$-3 \le x$

$1 < x < 4$

$-3 \le x < 4$

John manufacturer Red and Blue pens. He needs to ensure he makes more than double the number of red pens as blue **and** the total number of pens is at least 500. Let x be the number of red pens and y be the number of blue pens. Use this information to write an inequality given the information.