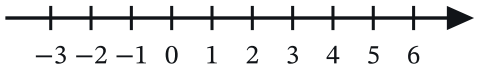
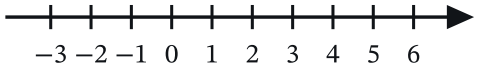
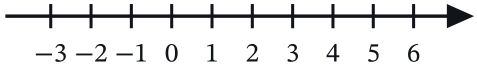
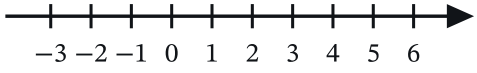
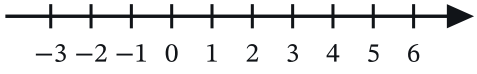
Name _____ Date _____

Order and Intervals

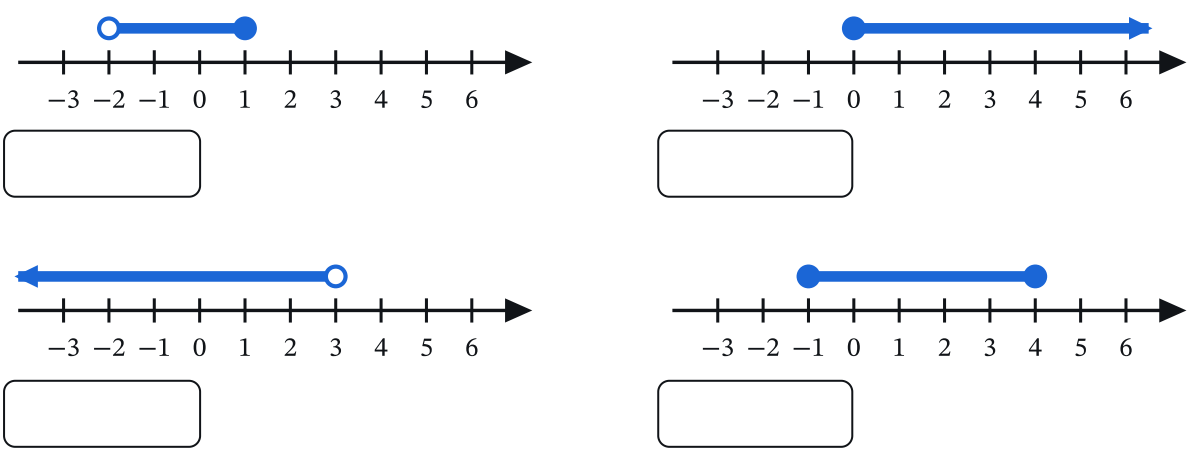
Remember

We write the set of numbers between a and b as an **interval**. A square bracket means the end is included (filled dot), a round one that it is not (open dot): $[a, b]$, (a, b), $[a, b)$, $(a, b]$. Infinity ∞ is not a number, so it always has a round bracket: $[a, +\infty)$, $(-\infty, b)$.

1 ON YOUR OWN Complete the table and show the interval on the number line.

Inequality	Interval	On the line
$-2 \leq x \leq 3$		
$1 < x < 4$		
$x \geq -1$		
$x < 2$		
	$(0, 5]$	

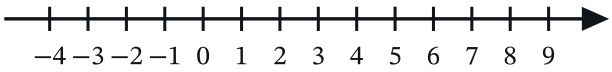
2 ON YOUR OWN Write the set shown in the picture as an interval.



Names (pair) _____ Date _____

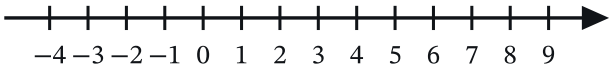
3 IN PAIRS **Union and intersection.** Show both intervals on the same line (one above the other), then write $A \cup B$ and $A \cap B$.

$A = [-2, 3)$,
$B = (1, 5]$



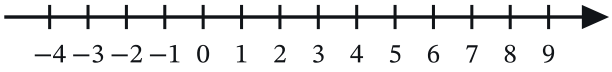
$A \cup B =$ ☐
$A \cap B =$ ☐

$A = (-\infty, 0]$,
$B = (-3, 4)$



$A \cup B =$ ☐
$A \cap B =$ ☐

$A = [2, 6]$,
$B = (6, 9)$



$A \cup B =$ ☐
$A \cap B =$ ☐

4 IN PAIRS **True or false?**

$3 \in (1, 3)$	**true**	/	**false**
$0 \in [-1, 0]$	**true**	/	**false**
$(2, 5) \subset [2, 5]$	**true**	/	**false**
$-\infty \in (-\infty, 1)$	**true**	/	**false**

5 ON YOUR OWN Which integers are in the interval $[-2, 3)$?

☐

The Number Line app · otooly.com/number-line

Intervals mode: type two intervals and choose **Union** or **Intersection**.

★ ON YOUR OWN **Exit card.** Write as an interval: $-1 < x \leq 4$ ☐