Solving Compound Inequalities

Intersection
Conjunction
"And"

$x > 4$ and $x < 7$

$-3 \leq x < 4$

$2 \geq x \geq -1$

Union
Disjunction
"Or"

$x > 4$ or $x \leq 2$

$-5 < x$ or $-7 > x$

Directions: Solve and graph each compound inequality.

1. $-7 < 3x + 5 \leq 8$

2. $6 \leq 8 - 3x \leq 7$

3. $-3x+8<4$ or $-2x-1\geq 0$

$$\longleftrightarrow$$

4. $3y+2\geq -2$ or $-4y+1\geq -3$

$$\longleftrightarrow$$