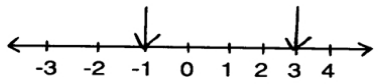
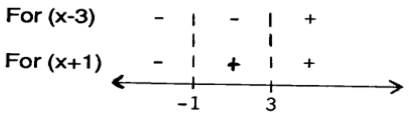
Quadratic Inequalities
Worksheet to Accompany Videotape #11

Example: $x^2 - 2x > 3$

Steps	Example
1. Rewrite expression so the inequality is >0 or <0.	1. $x^2 - 2x - 3 > 0$
2. Factor.	2. $(x-3)(x+1) > 0$
3. Find all values of x for which entire expression = 0.	3. $x = 3,\ x = -1$
4. Locate these numbers on the number line.	4. 
5. These numbers divide line into 3 parts.	5. $x < -1,\ -1 < x < 3,\ x > 3$
6. Select a number from each part and examine signs of factors when x has chosen value.	6. Take the part $x < -1$. Select any number in this part, say $x = -3$. Then for $(x+1)$, we have $-3+1 = -2$ or a negative number. Therefore $(x+1)$ is negative in this part. Continuing the procedure for each factor and for each part, we obtain: 
7. These signs determine the sign of the whole expression.	7.