

CHAPTER 6 SECTION 1A

Solutions on a number line

Inequality symbols

- Used to compare 2 non-equal values

- Symbol

- $<$

- $>$

- \leq

- \geq

- Read as

- **“ is less than”**

- **“ is greater than”**

- **“ is less than or equal to”**

- **“ is greater than or equal to”**

Graphing Inequalities

- The solutions to an inequality is a range of numbers (is not just a single number)
- Steps for graphing:
 - ▣ Draw a number line and label the key points
 - ▣ Mark the appropriate dot (open or closed)
 - ▣ Shade in the correct region

Open vs. Closed dots

□ $<$ and $>$ use **open dots** on the number line

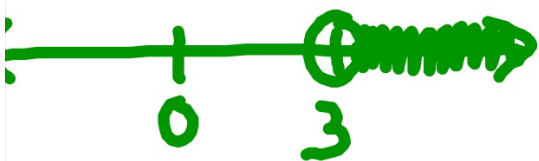
□ \leq and \geq use **closed dots** on the number line

Shading: Left or Right

- For $<$ and \leq you shade to the **left**
- For $>$ and \geq you shade to the **right**

Examples:

□ 1. $x > 3$



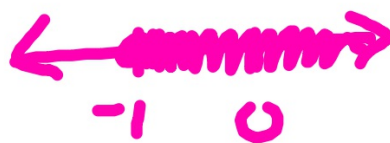
□ 2. $x < 4$



Examples:

□ 3. $x \leq 8$

□ 4. $x \geq -1$



Examples

□ 5. $x < 7$



□ 6. $x \geq -4$



On your own

□ 7. $x > -3$



□ 8. $x \leq 5$



□ 9. $x < -2$



□ 10. $x \geq 0$



Class Work

□ Worksheet 6.1 A

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$x > 6$

