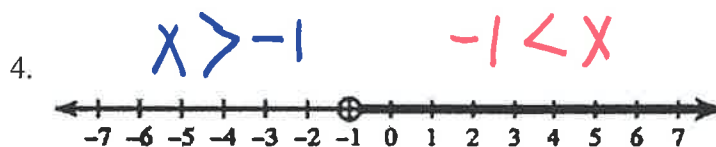| Unit 6: Inequalities	Name:_____
Lesson 4: Solving Inequalities with Variables on Both Sides	Hour:__Key__
Notes 6.4	

Write an Inequality for each Graph

1. $x \geq 4$ $4 \leq x$

2. $x < 2$ $2 > x$

3. $x \leq 1$ $-1 \geq x$

4. $x > -1$ $-1 < x$
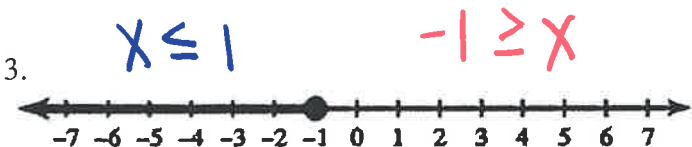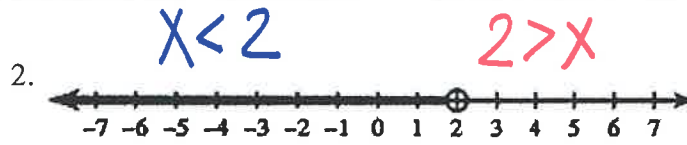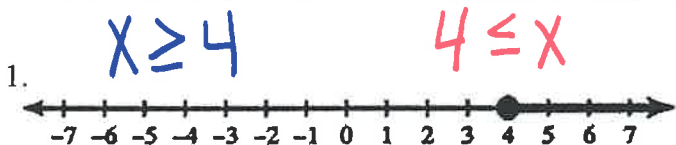
Solving Inequalities with Variables on Both Sides and Graphing

1. $8n - 2 > 19n + 9$

$8n - 2 \boxed{+2} > 19n + 9 \boxed{+2}$

$8n - 19n > 19n + 11 \ -19n$

$\dfrac{-11n}{-11} > \dfrac{11}{-11}$

*Switch the sign!

$\boxed{n < -1}$
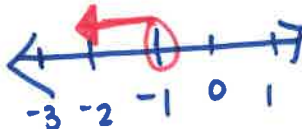
2. $5d - 8d - 4 \geq -4 + 3d$

$-3d - 4 - 3d \geq -4 + 3d \ -3d$

$-6d - 4 + 4 \geq -4 + 4$
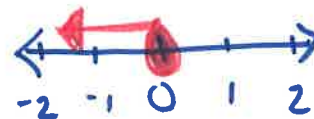
$\dfrac{-6d}{-6} \geq \dfrac{0}{-6}$

*Switch the sign!

$\boxed{d \leq 0}$

3. $3p - 5 > 2p + p - 7$

$3p - 5 \ -3p > 3p - 7 \ -3p$

$\boxed{-5 > -7}$

TRUE!

ARN

4. $4 - 2m > 7 - 3m$

$4 - 2m + 2m > 7 - 3m + 2m$

$4 \ -7 > 7 - m \ -7$

$\dfrac{-3}{-1} > \dfrac{-m}{-1}$

*Switch the sign!

$\boxed{3 < m}$

5. $5(4m + 10) < 20m + 2$

$20m + 50 \ -20m < 20m + 2 \ -20m$

$\boxed{50 < 2}$

FALSE!

NS
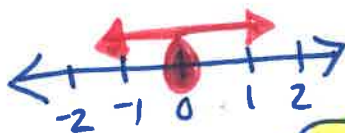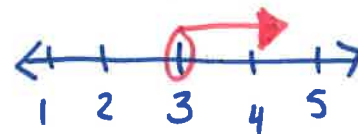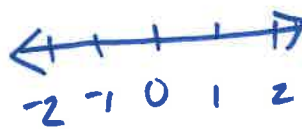
6. $2(4c - 7) \geq 8(c - 3)$

$8c - 14 \ -8c \geq 8c - 24 \ -8c$

$-14 \geq -24$

TRUE!

ARN

Homework: "Why Was professor Clabberhead Utterbunk…" wkst.

Adapted: