

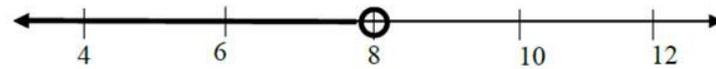
"Ill-Behaved" Inequalities

A PBL for Unit 4/Grade 6 math

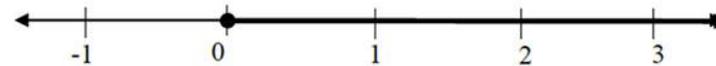
Watch the following videos on inequalities:

<https://www.youtube.com/watch?v=bbTvayT5Cz8>

https://learnzillion.com/lesson_plans/5138-write-and-graph-inequalities-shopping



$$x < 8$$



$$x \geq 0$$

Task Card 1

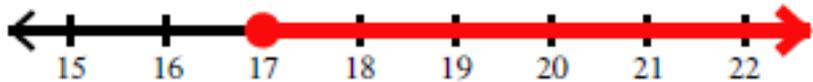
You and your partner write down the following problems, **DISCUSS** (Level 5) and then **CONSTRUCT** (Level 5) an inequality expression for each :

1. You need to earn at least \$50.
2. You can spend no more than \$5.60
3. The trip will take at least 4 hours.
4. The car ride will be less than 8 hours.
5. Four boxes of candy contained at least 48 pieces total.
6. With John's 7 marbles and mine, we had less than 20 marbles together.

Task Card 2

Here is an example of an inequality graphed on a number line. Please write this in your interactive notebook:

$$p \geq 17$$



Notice if the $<$ $>$ sign is underlined, then the circle is filled in to show it could also be “equal to”

Task Card 3

EVALUATE (level 5) the following word problems. Then, you and your partner write the inequality and a possible answer for each problem.

- a. What is the minimum speed needed to travel at least 440 miles in 8 hours?
- b. What is the minimum number of 80-passenger buses needed to transport 375 students?

Task Card 4: YOUR PROBLEM TO SOLVE

Now, you and your partner (on your own sheet of paper), CONSTRUCT (level 4) a WORD problem to match each inequality below. Next, you will CONSTRUCT (level 4) a number line and then graph each inequality below.

$$b < 7$$

$$t < 4$$

$$r > 10$$

$$k < 18$$

$$m > 1$$

$$d > 2$$

Task Card 5

Now, you and your partner will each need a device to go to this website:

<http://www.classzone.com/etest/viewTestPractice.htm?testId=4262>

You will take the 5 question review. At the end, click on “submit answers for grading.” When it pulls up the questions and your answers, please print this out and hand it in to your teacher.

Task Card 6

https://www.mangahigh.com/en-us/math_games/algebra/inequalities/inequalities

Now, if time permits, you and your partner may play this game on inequalities! 😊