Inequalities: $<, >, \leq, \geq, \neq$

$$-1.22078 \quad 1.2247 \quad -1.229 \quad 1.22065$$

$$-1.23001 \quad 1.2301 \quad -1.22099$$

The larger the negative the smaller the number.

-1.23001 -1.229 -1.22099 -1.22078 1.22065 1.2247 1.2301
_____ _____ _____ _____ _____ _____ _____

Put these in order from least to greatest.

$$\frac{8}{7} \quad \frac{2}{7} \quad \frac{-3}{7} \quad \frac{9}{7} \quad \frac{4}{7} \quad \frac{-1}{7}$$

When fractions have the same numerator then the smaller the numerator the smaller the number. Order the fractions from smaller smallest numerator to largest numerator

$$\frac{-3}{7} \quad \frac{-1}{7} \quad \frac{2}{7} \quad \frac{4}{7} \quad \frac{8}{7} \quad \frac{9}{7}$$

Put these in order from least to greatest.

$$\frac{5}{6} \quad \frac{5}{13} \quad \frac{5}{8} \quad \frac{5}{17} \quad \frac{5}{7} \quad \frac{5}{11}$$

When fractions have the same numerator then the bigger the denominator creates a smaller number. Order the fractions from largest denominator to smallest denominator.

$$\frac{5}{17} \quad \frac{5}{13} \quad \frac{5}{11} \quad \frac{5}{8} \quad \frac{5}{7} \quad \frac{5}{6}$$

Panel 1

2. Put these in order from least to greatest.

>1	$<\frac{1}{2}$	>2	$>\frac{1}{2}$	<2	<1
$\dfrac{6}{5}$	$\dfrac{8}{17}$	$\dfrac{45}{22}$	$\dfrac{11}{20}$	$\dfrac{31}{16}$	$\dfrac{24}{25}$

these fractions can be organized by estimating their size.

$$\dfrac{8}{17} \qquad \dfrac{11}{20} \qquad \dfrac{24}{25} \qquad \dfrac{6}{5} \qquad \dfrac{31}{16} \qquad \dfrac{45}{22}$$

Panel 2

Write an inequality to model each statement.

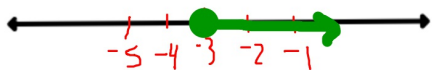1. The maximum number of letters that will fit into the mailbox is 500. $L \leq 500$

2. She must score at least a 32 on the ACT to be accepted to Harvard. $S \geq 32$

3. The class can hold no more than 30 students. $C \leq 30$

4. The restaurant can take up to 42 reservations. $R \leq 42$

Panel 3
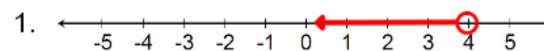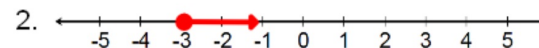
Graph each inequality on a number line.

1. $Q \geq -3$

$-5 \; -4 \; -3 \; -2 \; -1$

2. $8 < K$

$6 \; 7 \; 8 \; 9 \; 10$

Panel 4

Write an inequality that models each graph.

1. $-5 \; -4 \; -3 \; -2 \; -1 \; 0 \; 1 \; 2 \; 3 \; 4 \; 5$

$W < 4$

2. $-5 \; -4 \; -3 \; -2 \; -1 \; 0 \; 1 \; 2 \; 3 \; 4 \; 5$

$A \geq -3$