Activity 6: Too Fast! (Fill-in all the blanks and solutions!)

Directions: Solve each inequality. To solve the riddle below, write each variable in the blank above its answer.

1. $I + 8 \leq 6$ (I <= -2)
2. $V - 6 > 8$ V >
3. $N - (-3) < 20$ N <
4. $3U > 69$ U >
5. $-13S < -195$ S >
6. $A \div 7 \geq -112$ A >=
7. $17M \geq -102$ M >=
8. $-13E \leq -91$ E >=
9. $B \div -14 < -11$ B >
10. $R \div -3 \leq 5$ R >=
11. $8T \leq -120$ T <=
12. $H \div 21 > -12$ H >
13. $22C \geq -352$ C >=

Question: What caused the elderly man to walk so fast?

I						
≤ -2	≤ -15		≥ -6	> 23	> 15	≤ -15

> -252	≥ -784	> 14	≥ 7		> 154	≥ 7	≥ 7	< 17

≤ -15	≥ -252	≥ 7

				I					
> -252	> 23	≥ -15	≥ -15	≤ -2	—	≥ -16	≥ -784	< 17	≥ 7

❑ Addition and Subtraction Inequalities

Inequalities are similar to equations in the way they are solved. However, there may be more than one answer to make an inequality sentence correct.

Example: $f + 5 < 12$

$-5 \quad -5$

$f \quad < 7$

Example: $t - 16 \geq 21$

$+16 \quad +16$

$t \quad \geq 37$

❑ Multiplication and Division Inequalities

When solving multiplication and division inequalities involving negatives, there are some special rules to remember. The most important rule is, if you multiply or divide by a negative number (if there is a negative number in the step), the inequality sign must reverse its direction.

Example: $m \div 11 \leq -2$

$x\,11 \quad x\,11$ Positive in step

$m \leq -22$ Sign does not reverse

Example: $g \times 3 > -24$

$\div 3 \quad \div 3$ Positive in step

$g \quad > \quad -8$ Sign does not reverse

Example: $m \div (-11) \leq 2$

$x\,-11 \quad x\,-11$ Negative in step

$m \quad \geq -22$ Sign must reverse

Example: $g \times (-3) > -24$

$\div -3 \quad \div -3$ Negative in step

$g \quad < \quad 8$ Sign must reverse