WRITING AND SOLVING INEQUALITIES – DAY 2

Solve each of the following inequalities and graph the solution.

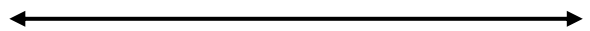|	
1. $7x + 1 \leq x - 5$	2. $-\frac{3}{2}x - 8 > -6$
3. $4x > 3(7 - x)$	4. $5(4 + x) \leq 3(2 + x)$
5. $-4(3 - x) > \frac{1}{2}(10x + 10)$	6. $-5(x + 3) - 6 < x + 3$

Write an inequality and solve.

7. Kiara and her brother open a savings account at the same time. Her brother deposited $50 and will deposit $25 each week. Kiara deposited $100 and will deposit $15 each week. When will her brother have more money in his account than Kiara?

Inequality: _____

8. *Windows Plus* charges a $300 installation fee plus $150 for each window installed. *Express Windows* charges a $125 installation fee plus $175 for each window installed. How many windows, w, need to be installed for *Windows Plus* to be cheaper than *Express Windows*?

Inequality: _____

9. Liz has $17.00 to spend at a *Annie's Treats*. She orders a jumbo cupcake for $4.50 and spends the remaining money on cookies. If each cookie costs $2, which inequality describes c, the number of cookies she purchased?

A. $2c + 4.5 \leq 17$ C. $2c + 4.5 > 17$

B. $2 + 4.5c \leq 17$ D. $2 + 4.5c > 17$

10. Chris is buying a floral arrangement for his mother. Roses cost $3 each, daisies cost $1.50 each, and the vase costs $15. If Chris wants to spend no more than $40, which inequality represents how many roses, r, and daisies, d, that can be included in the arrangement?

A. $3r + 1.5d \leq 40$ C. $1.5r + 3d \leq 25$

B. $1.5r + 3d \leq 40$ D. $3r + 1.5d \leq 25$

Answers in random order: $x \leq -1$, $x > 7$, $x < -17$, $x < -\frac{4}{3}$, $x > 3$, $x > 5$, $x > -4$, $x \leq -7$
(except for #9-10)