Solve the proportion.   Simplify.

1. $\dfrac{-6}{2x+3} = \dfrac{-4}{2x-1}$ 2. $\dfrac{2+45\div15*6-4}{(3-7+2)^2}$

Solve the equation or inequality. <u>Use properties of equality to justify each step.</u>

3. $-14 - 6x > 22 - 3x$ 4. $8 + 4(3x - 7) = -17$

5. Sara, Jill, and Tonya are all avid kayakers. They were discussing how much time they each put in on the river yesterday. Sara says she travelled 2650 yards after work. Jill put in 254,000 centimeters that morning. Tonya travelled 2.38 kilometers over her lunch break.
   Who travelled the greatest distance? <u>Show your work.</u>

6. Joe just found $5 under his bed. With that and his $8 allowance every week, he is getting closer to his goal. Joe would like to be able to purchase a new skateboard that costs $238. Write the equation or inequality that represents how many weeks he will have to wait until he can afford the skateboard.

Inequality/Equation: _____   **Now solve, justifying your steps.**

7. Mrs. Pischke bought a big bag of candy for the math teachers a couple of weeks ago. The bag came with 120 pieces of candy in it. After taking 2 pieces of candy out each day, she now only has 64 pieces left. Write an equation or inequality to represent how many times teachers have come in for candy.

Inequality/Equation: _____   **Now solve, justifying your steps.**

8. After spending $17.50 on supplies, Lily has created a bunch of bracelets and necklaces using her weaving loom. She plans to sell them at the neighborhood garage sale in hopes of raising enough money to buy a new bike. The bike is on sale for $109.99. The following inequality represents her situation:

$$\mathbf{3.50b + 5.00n - 17.50 \geq 109.99}$$

a. Name the appropriate vocabulary for "3.50": _____

b. Name the appropriate vocabulary for "n": _____

c. Name the appropriate vocabulary for "17.50": _____

d. What does "5.00n" mean in context of the problem? _____

e. What does "3.50b+5.00n" mean in context of the problem? _____

f. Why did I make this an inequality instead of an equation?