Practice: U1A L6 Writing & Solving Equations and Inequalities	Name: _____ HR: _____

Directions: *For word problems, define the variable, write the model, solve, and answer in context. Show work.*

Quick Review - Solve each inequality.

R1. 3(x + 2) - 7 < 8	**R2. 5 - 4m ≥ 1**	**R3. 2(x - 3) + 4 ≤ 10**

Modeling Practice - Build the expression FIRST, then choose the relationship.

4. A carnival charges $4 to enter and $5 for each game. Jordan spent exactly $54. How many games did Jordan play? *Define: g = number of games* **Model:** **Solve:** **Answer explained:**	**5. A carnival charges $6 to enter and $2 for each game. You have no more than $54. How many games can you play?** *Define: g = number of games* **Model:** **Solve:** **Answer explained:**
6. A fundraiser already has $25 and earns $10 for each item sold. The goal is at least $112. How many items must be sold? *Define: n = number of items sold* **Model:** **Solve:** **Answer explained:**	**7. A phone plan costs $20 per month plus $0.08 per text. One bill was exactly $180. How many texts were sent?** *Define: t =* **Model:** **Solve:** **Answer explained:**
8. A taxi charges a $5 starting fee plus $2.50 per mile. The ride cost exactly $20. How many miles were traveled? *Define: m =* **Model:** **Solve:** **Answer explained:**	**9. A gym charges a $35 registration fee plus $20 per month. You can spend at most $155. How many whole months can you afford?** *Define a variable:* **Model:** **Solve:** **Answer explained:**

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Directions: *Write your own variable definition when one is not given. Decide whether the situation is exact, a maximum, or a minimum.*

10. A movie theater charges $9 per ticket plus a one-time online fee of $4. Your total was exactly $49. How many tickets did you buy?

Define:

Model: **Solve:**

Answer explained:

11. A school club has $42 saved and earns $8 for each car it washes. The club needs at least $130. How many cars must it wash?

Define:

Model: **Solve:**

Answer explained:

12. A rental company charges $28 per day plus a $35 cleaning fee. You have no more than $175. How many whole days can you rent the item?

Define:

Model: **Solve:**

Answer explained:

13. You have already read 36 pages of a book and read 18 pages per day. You want to reach at least 180 pages. How many more days must you read?

Define:

Model: **Solve:**

Answer explained:

14. A video game starts you with 120 points and adds 35 points for each level completed. Your score is exactly 365 points. How many levels did you complete?

Define:

Model: **Solve:**

Answer explained:

15. A delivery service charges a $6 fee plus $1.75 per mile. You can spend at most $20. How many whole miles can the delivery travel?

Define:

Model: **Solve:**

Answer explained:

Finish Strong - Write the model first. Then solve or interpret as directed.

16. A streaming service charges $12 per month plus a $6 start-up fee. Write an inequality for spending no more than $66. Then determine the greatest whole number of months. SHOW all work

17. A student has 14 points and earns 4 points for each correct answer. Write an inequality for needing at least 42 points. Then determine the minimum number correct. SHOW all work

18. LOOKING AHEAD: A ride requires riders to be at least 48 inches tall and no more than 78 inches tall. Let h = height in inches. Write ONE compound inequality. Do not solve.