## TRS 92: Solving Inequalities with One Variable

Solve the following inequalities. Then graph the solution on the number line given.

1. $-2 x-13>-7$
2. $5 y+7 \leq 2 y+1$

3. $-\frac{3 n}{4}<1$

4. It costs $\$ 5$ per day for parking at a local parking garage. The owner of the garage offers a monthly parking pass that costs $\$ 60$. For what number of days is the daily parking rate a better deal?
a. Identify the variable.
b. Write the inequality that represents this situation.
c. Solve the inequality. Show your work.
d. Write the answer to part c using a complete sentence and correct vocabulary.
e. Which of the following number of days would be possible solutions to the problem (circle all possible answers)?

| 9 days | 12 days | 15 days | 1 day | 20 days | 25 days |
| :--- | :--- | :--- | :--- | :--- | :--- |

5. A student in an intermediate algebra course must take 5 exams. His scores on the first four exams this semester were $93,95,84$, and 80 . What is the minimum he must score on the last exam to have an average score of at least 87 ?
a. Identify the variable.
b. Write the inequality that represents this situation.
c. Solve the inequality and show your work.
d. Write the answer to part c using a complete sentence and correct vocabulary.
e. For which of the following test scores would the average be met (circle all possible answers)?

| 83 | 84 | 85 | 86 | 82 | 81 | 80 | 67 | 94 | 100 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

