

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**BLM 9-5**

## Section 9.3 Extra Practice

Check the solution.

1. Explain how to verify that the solution to the inequality  $\frac{x}{2} - 2 \leq 6$  is  $x \leq 16$ .

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2. Solve each inequality.

a)  $3x - 5 > 4$

b)  $4x + 3.2 < 1.4$

c)  $8(x + 3) > -16$

d)  $-6(x - 5) \leq 42$



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3. Solve. Draw the solution on the number line.

**a)**  $9x + 4 \leq 5x + 12$

**b)**  $5x - 2 > 9x - 10$

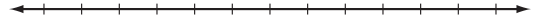
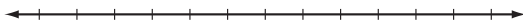
$$9x + 4 - 5x \leq 5x + 12 - 5x$$

$$\underline{\hspace{2cm}}x + 4 \leq 12$$

$$\underline{\hspace{2cm}}x + 4 - 4 \leq 12 - 4$$

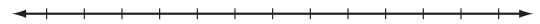
$$\frac{\boxed{\hspace{2cm}}x}{\boxed{\hspace{2cm}}} \leq \frac{\boxed{\hspace{2cm}}}{\boxed{\hspace{2cm}}}$$

$$x \leq \underline{\hspace{2cm}}$$



**c)**  $3(2x - 3) < 11 + 2x$

**d)**  $4(2x - 1) + 5(x + 1) \geq 14$



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(continued)

**4. Verify each solution.**

**a)**  $2x - 9 > 5x + 6; x < -5$

Check  $x < -5$ . Let  $x =$  \_\_\_\_\_

**b)**  $3(x + 3) \leq 9 + 2(x + 4); x \leq 8$

Check  $x = 8$ .

Left Side	Right Side

Check  $x < 8$ . Let  $x =$  \_\_\_\_\_

Is  $x < -5$  the solution?

Circle YES or NO.

Is  $x \leq 8$  the solution?

Circle YES or NO.



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**BLM 9-5**  
(continued)

5. Your parents are having a party at a hall for their 25th wedding anniversary. Hall A charges \$200 for the hall plus \$30 per person. Hall B charges \$400 for the hall plus \$20 per person.

- a) Write and solve an inequality to find the number of people who could attend the celebration at Hall A with a cost of no more than \$2000.  
Let  $n$  = number of people

	Cost Per Person	Cost for $n$ People	Cost of Hall	Total Cost
Hall A				

*Inequality:*

*Solve:*

Sentence: \_\_\_\_\_

- b) Write an inequality to show the number of people who could attend the celebration at Hall B with a cost of no more than \$2000.  
Let  $n$  = number of people

	Cost Per Person	Cost for $x$ People	Cost of Hall	Total Cost
Hall B				

*Inequality:*

*Solve:*

Sentence: \_\_\_\_\_

- c) Which hall offers the best deal? Give 1 reason for your answer.

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**BLM 9-5**  
(continued)

6. The following are the wages for two summer jobs building grain bins.  
Job A: \$60 per bin plus a fee of \$120 per day  
Job B: \$75 per bin plus a fee of \$90 per day  
Complete the table. Then write and solve an inequality to find how many grain bins you would need to build each day to make Job B pay more than Job A.

Let  $n$  = number of bins

	<b>Cost Per Bin</b>	<b>Cost for <math>n</math> Bins</b>	<b>Fee Per Day</b>	<b>Total Cost Per Day</b>
<b>Job A</b>				
<b>Job B</b>				

*Inequality:* \_\_\_\_\_

*Solve:*

*Sentence:* \_\_\_\_\_

