

2.15

Solving a Linear Inequality: Problem Type 2

• Example 1

Solve the inequality

$$7x + 3 \leq 17$$

To isolate x in this inequality, we first subtract 3 from both sides.

$$7x + 3 - 3 \leq 17 - 3$$

$$7x \leq 14$$

Next, we divide both sides by 7.

$$\frac{7x}{7} \leq \frac{14}{7}$$

$$x \leq 2$$

• • • CHECK YOURSELF 1

Solve the following inequalities.

a. $8x - 7 \leq 1$

b. $2x - 3 > 5$

• • • CHECK YOURSELF ANSWER

1. (a) $x \leq 1$; (b) $x > 4$.

2.15 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

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10. _____

11. _____

12. _____

Solve the following inequalities.

1. $3x \leq 9$

2. $5x > 20$

3. $5x > -35$

4. $7x \leq -21$

5. $4x \geq -12$

6. $2x + 3 \geq 9$

7. $2x - 5 \leq 9$

8. $3x - 5 < 4$

9. $8x + 13 > 37$

10. $7x - 4 < 24$

11. $5x + 22 \geq 57$

12. $9x - 16 < 56$