



Name \_\_\_\_\_

Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 1: Guided Practice (We Do)

**Materials:**

- Algebra Tiles (1 set on p. 13: 20 +1s and 16 +x's per student)
- Equation mat (1 per student)

**We Do Together:** (Teacher Actions)

- Say, build and simplify each algebraic expression.

*(Both partners build the original expression and only one rearranges their tiles to simplify the expression.)*

|                     |                                   |
|---------------------|-----------------------------------|
| 1.<br>$2x + 4 + 3x$ | 2.<br>$x^2 + 3x + 4 + x - 3$      |
| 3.<br>$2(x + 3)$    | 4.<br>$2(x^2 + 3) + x^2 + 4x - 1$ |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 1: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

|                                     |   |
|-------------------------------------|---|
| 5.<br>$2x + 4 + 3x + 2 + x - 1$     | 6.<br>$x^2 + 2x + 4 + x + 1 + 3x^2$       |
| 7.<br>$3(x + 4)$                    | 8.<br>$3(x^2 + 2x + 4)$                   |
| 9.<br>$2(3x^2 + 5) + 2x^2 + 4x - 2$ | 10.<br>$2(x^2 + 2x + 1) + 3(x^2 + x + 2)$ |



# Quick Check - Form A

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions.

**Directions:** Write the simplified equivalent expression. (Work time: 4 minutes)

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| <p><b>1.</b></p> $x + x + x + x$    | <p><b>2.</b></p> $4x + 3 + 2x$      |
| <p><b>3.</b></p> $11 + 9x + 2 - 6x$ | <p><b>4.</b></p> $2(x + 6)$         |
| <p><b>5.</b></p> $4(x + 1) + 3x$    | <p><b>6.</b></p> $4(x + 3) - 2 + x$ |

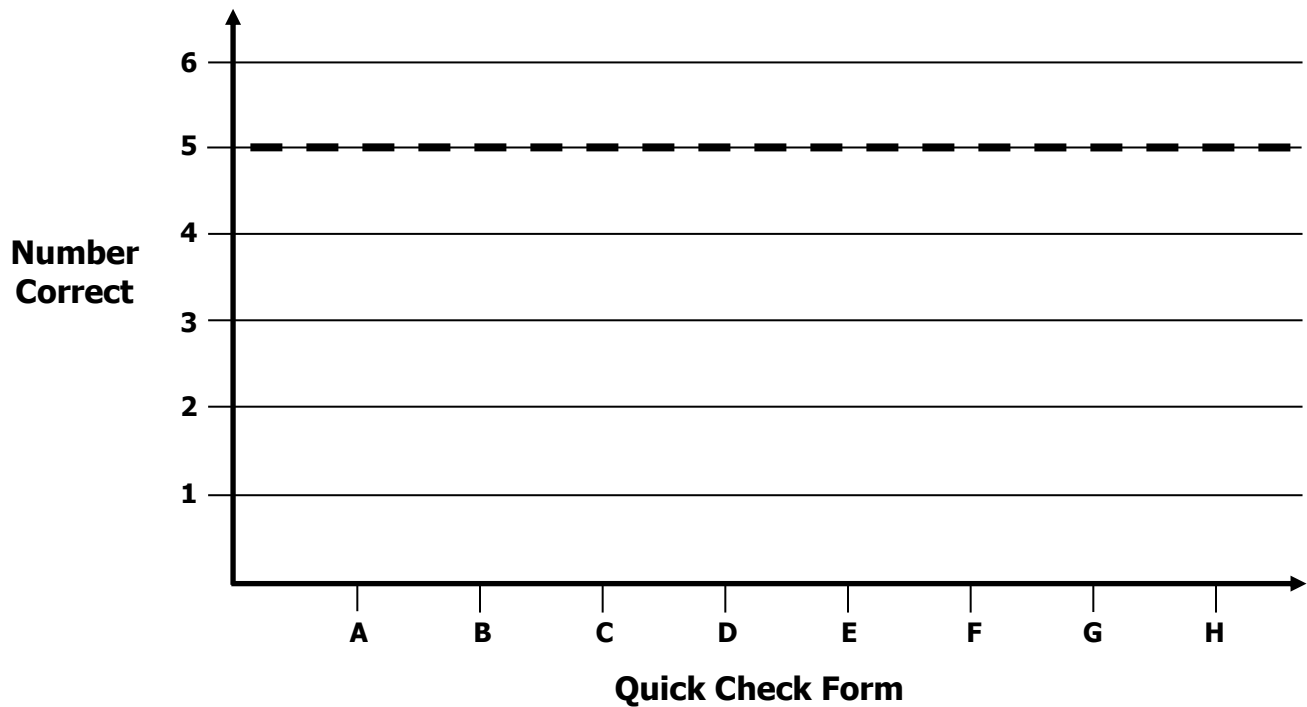


# Growth Chart

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions.

**Goal:** 5 out of 6 correct



| Intervention | Date | Score |
|--------------|------|-------|
| Session 1:   |      |       |
| Session 2:   |      |       |
| Session 3:   |      |       |
| Session 4:   |      |       |
| Session 5:   |      |       |
| Session 6:   |      |       |
| Session 7:   |      |       |
| Session 8:   |      |       |



Name \_\_\_\_\_

Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 2: Guided Practice (We Do)

**Materials:**

- Algebra Tiles (1 set on p. 13: 20 +1s and 16 +x's per student)
- Equation mat (1 per student)

**We Do Together:** (Teacher Actions)

- Say, build and simplify each algebraic expression.

*(Both partners build the original expression and only one rearranges their tiles to simplify the expression.)*

|                     |                                   |
|---------------------|-----------------------------------|
| 1.<br>$4x + 5 + 2x$ | 2.<br>$2x^2 + 4x + 3 + x - 1$     |
| 3.<br>$3(x + 2)$    | 4.<br>$2(x^2 + 1) + x^2 + 5x - 1$ |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 2: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

|                                     |   |
|-------------------------------------|---|
| 5.<br>$3x + 5 + 3x + 2 + x - 1$     | 6.<br>$x^2 + 3x + 4 + x + 1 + 2x^2$       |
| 7.<br>$3(x + 5)$                    | 8.<br>$2(x^2 + 3x + 4)$                   |
| 9.<br>$2(4x^2 + 5) + 2x^2 + 3x - 2$ | 10.<br>$3(x^2 + 2x + 1) + 2(x^2 + x + 2)$ |



# Quick Check - Form B

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions.

**Directions:** Write the simplified equivalent expression. (Work time: 4 minutes)

|                                |                                  |
|--------------------------------|----------------------------------|
| <b>1.</b><br>$x + x + x$       | <b>2.</b><br>$9x + 6 + x$        |
| <b>3.</b><br>$8x + 4 - 2x + 6$ | <b>4.</b><br>$4(x + 3)$          |
| <b>5.</b><br>$5x + 6(x + 1)$   | <b>6.</b><br>$4 + 5(x + 3) - 2x$ |



## Session 3: Modeling (I Do)

**Learning Target:** I will simplify algebraic expressions

**Readiness** for solving equations with more than one step

Sally scored 6 more than a mystery number points during last night's basketball game. Alexis scored 1 more than twice the mystery number of points during the same game. Together they scored  $x + 6 + 2x + 1$  points during the game. What is a simplified expression equal to the total number of points they scored?

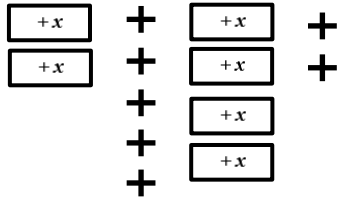
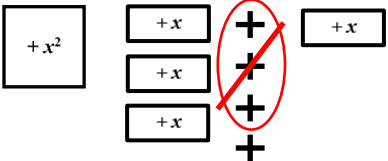
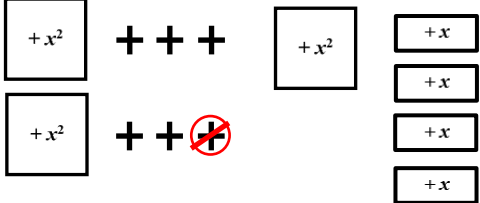


**Learning Target:** I will simplify algebraic expressions

## Session 3: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Say, draw, and simplify each algebraic expression.

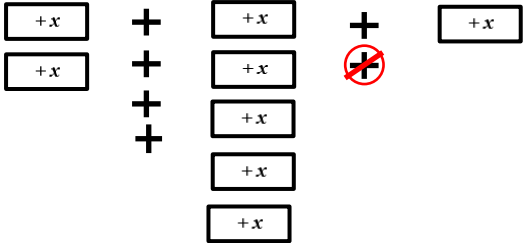
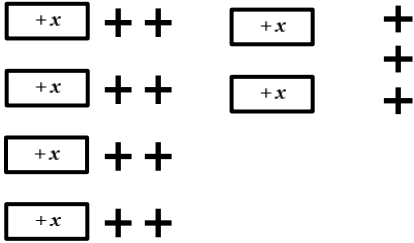
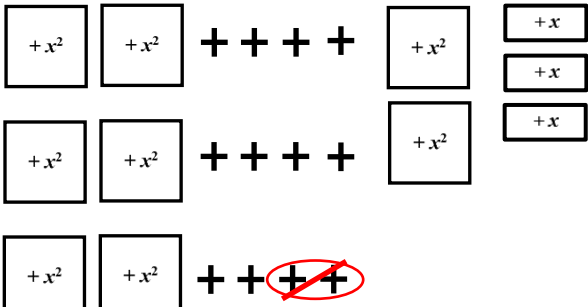
| Not Simplified  | Simplified |
|---|------------|
| <p>1.</p> $2x + 5 + 4x + 2$              |            |
| <p>2.</p> $x^2 + 3x + 4 + x - 3$       |            |
| <p>3.</p> $2(x^2 + 3) + x^2 + 4x - 1$  |            |

**Learning Target:** I will simplify algebraic expressions

## Session 3: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

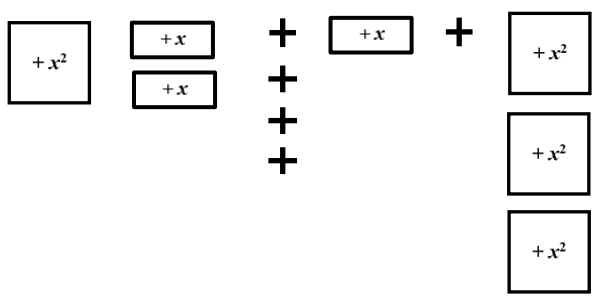
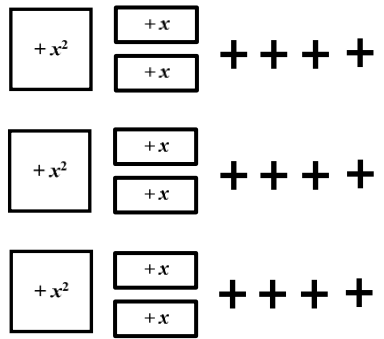
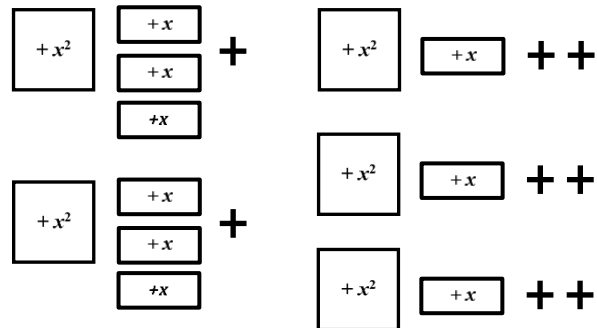
| Not Simplified  | Simplified |
|---|------------|
| <p>4.</p> $2x + 4 + 5x + 2 + x - 1$        |            |
| <p>5.</p> $4(x + 2) + 2x + 3$            |            |
| <p>6.</p> $3(2x^2 + 4) + 2x^2 + 3x - 2$  |            |

**Learning Target:** I will simplify algebraic expressions

## Session 3: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified   | Simplified |
|--|------------|
| <p>7.</p> $x^2 + 2x + 4 + x + 1 + 3x^2$         |            |
| <p>8.</p> $3(x^2 + 2x + 4)$                   |            |
| <p>9.</p> $2(x^2 + 3x + 1) + 3(x^2 + x + 2)$  |            |



# Quick Check - Form C

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions.

**Directions:** Write the simplified equivalent expression. (Work time: 4 minutes)

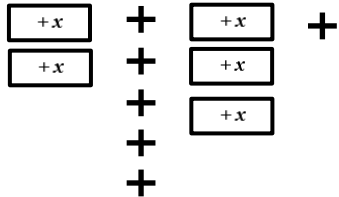
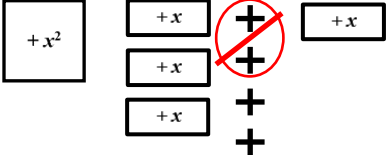
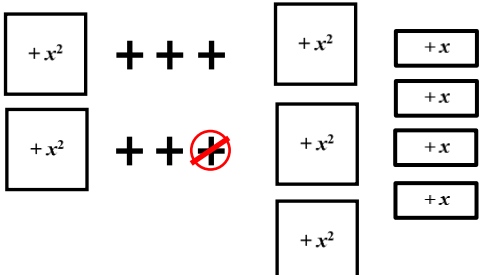
|                                      |                                     |
|--------------------------------------|-------------------------------------|
| <p><b>1.</b></p> $x + x + x + x + x$ | <p><b>2.</b></p> $4x + 3x + 2$      |
| <p><b>3.</b></p> $4x + 6 - 2x + 3$   | <p><b>4.</b></p> $5(x + 5)$         |
| <p><b>5.</b></p> $7(x + 2) - 5x$     | <p><b>6.</b></p> $x + 3(x + 1) - 2$ |

**Learning Target:** I will simplify algebraic expressions

## Session 4: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Say, draw, and simplify each algebraic expression.

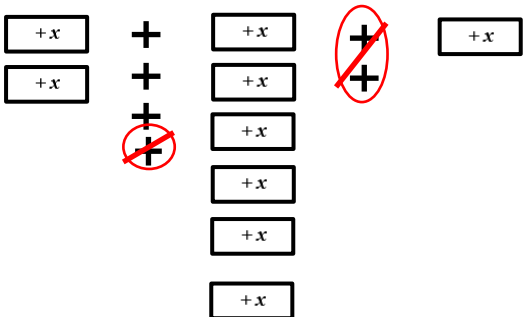
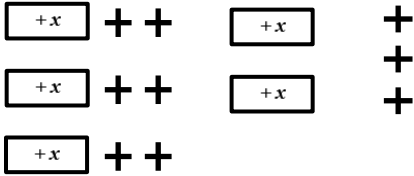
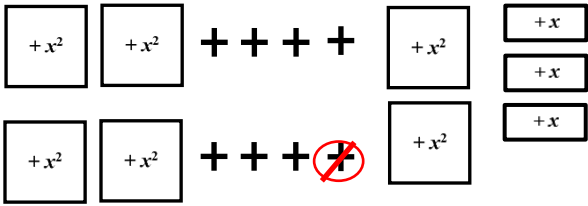
| Not Simplified   | Simplified |
|--|------------|
| <p>1.</p> $2x + 5 + 3x + 1$               |            |
| <p>2.</p> $x^2 + 3x + 4 + x - 2$        |            |
| <p>3.</p> $2(x^2 + 3) + 3x^2 + 4x - 1$  |            |

**Learning Target:** I will simplify algebraic expressions

## Session 4: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

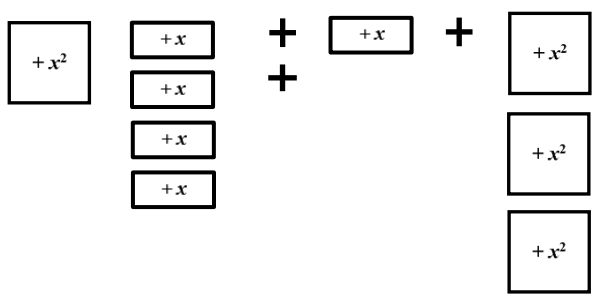
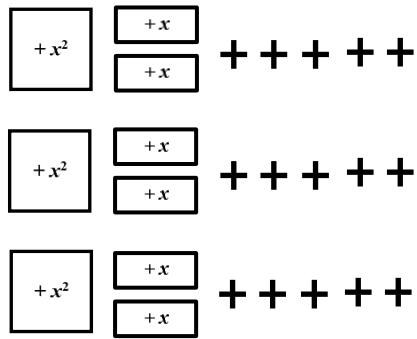
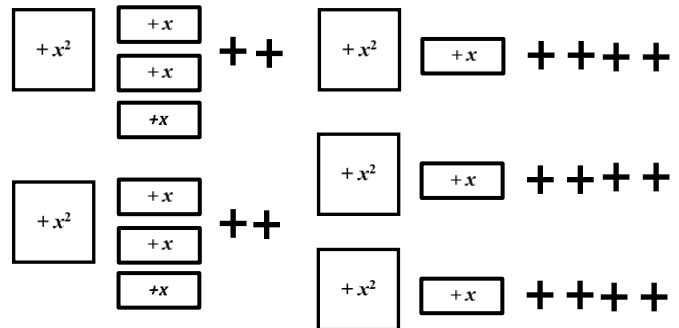
| Not Simplified  | Simplified |
|---|------------|
| <p>4.</p> $2x + 4 + 6x + 2 + x - 3$       |            |
| <p>5.</p> $3(x + 2) + 2x + 3$            |            |
| <p>6.</p> $2(2x^2 + 4) + 2x^2 + 3x - 1$  |            |

**Learning Target:** I will simplify algebraic expressions

## Session 4: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified   | Simplified |
|--|------------|
| <p>7.</p> $x^2 + 4x + 2 + x + 1 + 3x^2$         |            |
| <p>8.</p> $3(x^2 + 2x + 5)$                   |            |
| <p>9.</p> $2(x^2 + 3x + 2) + 3(x^2 + x + 4)$  |            |



# Quick Check - Form D

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions.

**Directions:** Write the simplified equivalent expression. (Work time: 4 minutes)

|                                |                                 |
|--------------------------------|---------------------------------|
| <b>1.</b><br>$x + x + x + x$   | <b>2.</b><br>$5x + 6x + 10$     |
| <b>3.</b><br>$3 + 9x - 6x + 4$ | <b>4.</b><br>$6(x + 7)$         |
| <b>5.</b><br>$4x + 2(x + 1)$   | <b>6.</b><br>$4(x + 2) - 3 + x$ |

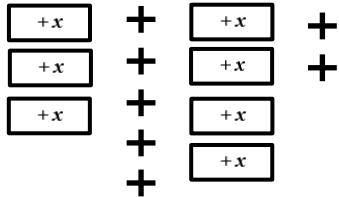
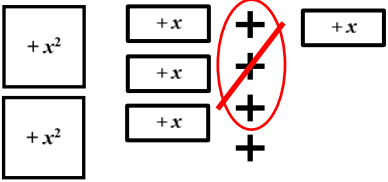
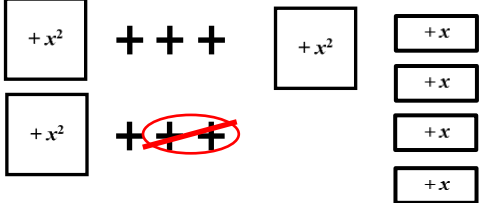


**Learning Target:** I will simplify algebraic expressions

## Session 5: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Say, draw, and simplify each algebraic expression.

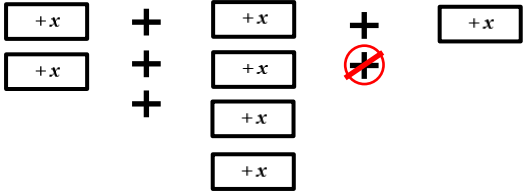
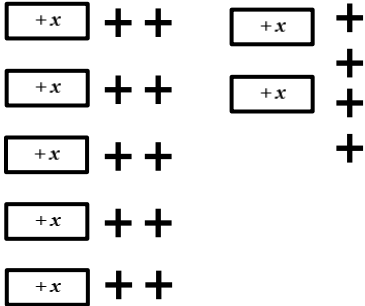
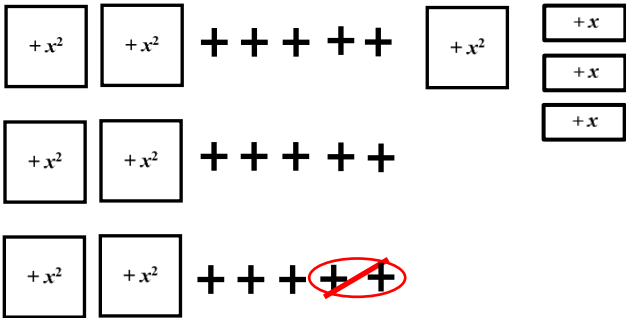
| Not Simplified  | Simplified |
|---|------------|
| <p>1.</p> $3x + 5 + 4x + 2$              |            |
| <p>2.</p> $2x^2 + 3x + 4 + x - 3$      |            |
| <p>3.</p> $2(x^2 + 3) + x^2 + 4x - 2$  |            |

**Learning Target:** I will simplify algebraic expressions

## Session 5: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified   | Simplified |
|--|------------|
| <p>4.</p> $2x + 3 + 4x + 2 + x - 1$       |            |
| <p>5.</p> $5(x + 2) + 2x + 4$           |            |
| <p>6.</p> $3(2x^2 + 5) + x^2 + 3x - 2$  |            |

**Learning Target:** I will simplify algebraic expressions

## Session 5: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified   | Simplified |
|--|------------|
| <p>7.</p> $2x^2 + 3x + 4 + x + 1 + 3x^2$ <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> </div> <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> </div> <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> </div> |            |
| <p>8.</p> $3(x^2 + 2x + 1)$ <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> </div> <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> </div> <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> </div>  |            |
| <p>9.</p> $2(x^2 + 3x + 2) + 3(x^2 + x + 1)$ <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> </div> <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> </div> <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x^2</math></div> <div style="margin: 0 5px;">+</div> <div style="border: 1px solid black; padding: 2px; margin: 2px;">+ <math>x</math></div> </div>   |            |



# Quick Check - Form E

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions.

**Directions:** Write the simplified equivalent expression. (Work time: 4 minutes)

|                                 |                                 |
|---------------------------------|---------------------------------|
| <b>1.</b><br>$x + x + x + x$    | <b>2.</b><br>$4x + 3 + 2x$      |
| <b>3.</b><br>$11 + 9x + 2 - 6x$ | <b>4.</b><br>$2(x + 6)$         |
| <b>5.</b><br>$4(x + 1) + 3x$    | <b>6.</b><br>$4(x + 3) - 2 + x$ |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 6: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Simplify each algebraic expression.

| Not Simplified                     | Simplified |
|------------------------------------|------------|
| 1.<br>$2x + 7 + x + 2$             |            |
| 2.<br>$x^2 + 5x + 9 + x - 2$       |            |
| 3.<br>$3(x^2 + 5) + 1$             |            |
| 4.<br>$2(x^2 + 3) + 3x^2 + 7x - 1$ |            |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 6: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified                      | Simplified |
|-------------------------------------|------------|
| 5.<br>$5x + 3 + 5x + 9 + x - 1$     |            |
| 6.<br>$7(x + 6) + 3x + 8$           |            |
| 7.<br>$5(2x^2 + 9) + 4x^2 + 8x - 5$ |            |
| 8.<br>$8(2x^2 + 7) + 3x^2 + 6x - 4$ |            |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 6: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified                             | Simplified |
|--|------------|
| 9.<br>$x^2 + 5x + 9 + x + 1 + 4x^2$        |            |
| 10.<br>$7(x^2 + 3x + 6) - 10$              |            |
| 11.<br>$3(x^2 + 4x + 1) + 4(2x^2 + x + 3)$ |            |
| 12.<br>$5(4x^2 + x + 1) + 2(x^2 + 7x + 3)$ |            |



# Quick Check - Form F

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions.

**Directions:** Write the simplified equivalent expression. (Work time: 4 minutes)

|                                |                                  |
|--------------------------------|----------------------------------|
| <b>1.</b><br>$x + x + x$       | <b>2.</b><br>$9x + 6 + x$        |
| <b>3.</b><br>$8x + 4 - 2x + 6$ | <b>4.</b><br>$4(x + 3)$          |
| <b>5.</b><br>$5x + 6(x + 1)$   | <b>6.</b><br>$4 + 5(x + 3) - 2x$ |





Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 7: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Simplify each algebraic expression.

| Not Simplified                     | Simplified |
|------------------------------------|------------|
| 1.<br>$4x + 7 + x + 2$             |            |
| 2.<br>$x^2 + 7x + 9 + x - 2$       |            |
| 3.<br>$6(x^2 + 5) + 1$             |            |
| 4.<br>$3(x^2 + 7) + 5x^2 + 9x - 1$ |            |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 7: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified                      | Simplified |
|-------------------------------------|------------|
| 5.<br>$2x + 3 + 8x + 7 + x - 1$     |            |
| 6.<br>$7(x + 8) + 3x + 6$           |            |
| 7.<br>$3(2x^2 + 7) + 5x^2 + 8x - 4$ |            |
| 8.<br>$9(2x^2 + 8) + 4x^2 + 6x - 3$ |            |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 7: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified                             | Simplified |
|--|------------|
| 9.<br>$x^2 + 4x + 7 + x + 1 + 5x^2$        |            |
| 10.<br>$6(x^2 + 7x + 8) - 10$              |            |
| 11.<br>$9(x^2 + 4x + 1) + 8(2x^2 + x + 7)$ |            |
| 12.<br>$3(7x^2 + x + 1) + 5(x^2 + 6x + 9)$ |            |



# Quick Check - Form G

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions.

**Directions:** Write the simplified equivalent expression. (Work time: 4 minutes)

|                                  |                                 |
|----------------------------------|---------------------------------|
| <b>1.</b><br>$x + x + x + x + x$ | <b>2.</b><br>$4x + 3x + 2$      |
| <b>3.</b><br>$4x + 6 - 2x + 3$   | <b>4.</b><br>$5(x + 5)$         |
| <b>5.</b><br>$7(x + 2) - 5x$     | <b>6.</b><br>$x + 3(x + 1) - 2$ |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 8: Guided Practice (We Do)

**We Do Together:** (Teacher Actions)

- Simplify each algebraic expression.

| Not Simplified                     | Simplified |
|------------------------------------|------------|
| 1.<br>$2x + 9 + x + 2$             |            |
| 2.<br>$x^2 + 5x + 8 + x - 2$       |            |
| 3.<br>$7(x^2 + 6) + 1$             |            |
| 4.<br>$2(x^2 + 3) + 4x^2 + 7x - 1$ |            |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 8: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified                      | Simplified |
|-------------------------------------|------------|
| 5.<br>$3x + 8 + 5x + 9 + x - 1$     |            |
| 6.<br>$7(x + 9) + 2x + 5$           |            |
| 7.<br>$9(2x^2 + 7) + 4x^2 + 8x - 5$ |            |
| 8.<br>$8(2x^2 + 7) + 5x^2 + x - 4$  |            |



Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions

## Session 8: Guided Practice (We Do - Continued)

**You Do Together:** (As a class, or in small groups)

- Students take turns leading to simplify each algebraic expression.

| Not Simplified                             | Simplified |
|--|------------|
| 9.<br>$x^2 + 5x + 9 + x + 1 + 6x^2$        |            |
| 10.<br>$7(x^2 + 3x + 6) - 2$               |            |
| 11.<br>$3(x^2 + 9x + 1) + 7(2x^2 + x + 3)$ |            |
| 12.<br>$6(4x^2 + x + 1) + 8(x^2 + 7x + 3)$ |            |



# Quick Check - Form H

Name \_\_\_\_\_ Date \_\_\_\_\_

**Learning Target:** I will simplify algebraic expressions.

**Directions:** Write the simplified equivalent expression. (Work time: 4 minutes)

|                                |                                 |
|--------------------------------|---------------------------------|
| <b>1.</b><br>$x + x + x + x$   | <b>2.</b><br>$5x + 6x + 10$     |
| <b>3.</b><br>$3 + 9x - 6x + 4$ | <b>4.</b><br>$6(x + 7)$         |
| <b>5.</b><br>$4x + 2(x + 1)$   | <b>6.</b><br>$4(x + 2) - 3 + x$ |