

Name: _____

Pd: 2nd/4th Date: 1/31/18

M7

CH 5.6/5.7 - Add/Subtract Linear Expression (Page 395/403)

ESSENTIAL QUESTION:

HOW can you use numbers and symbols to represent mathematical ideas?

Success Criteria:

1. I can add and subtract linear expressions.

SMPs:

1. Persevere with Problems
2. Reason Abstractly
3. Construct Viable Arguments
4. Model with Mathematics

CCSS:

- 7.EE.1
- 7.EE.2

Vocabulary:

Linear Expression

LINEAR EXPRESSION

An algebraic expression where the variable is raised only to the first power and the variables are not being multiplied or divided.

Linear Expressions	Nonlinear Expressions
$5x$	$5mn$
$3x + 2$	$3x^2 + 2$
$x - 7$	$x^4 - 7$

When adding linear expressions,

When subtracting linear expressions, subtract like terms and use zero pairs if necessary.

EXAMPLES

Add the following expressions.

1. $(3x + 5) + (2x + 3)$

2. $(2x - 4) + (3x - 7)$

3. $6(x + 7) + (x + 3)$

4. $(12x + 19) + 2(x - 10)$

Subtract the following expressions.

5. $(5x - 9) - (2x - 7)$

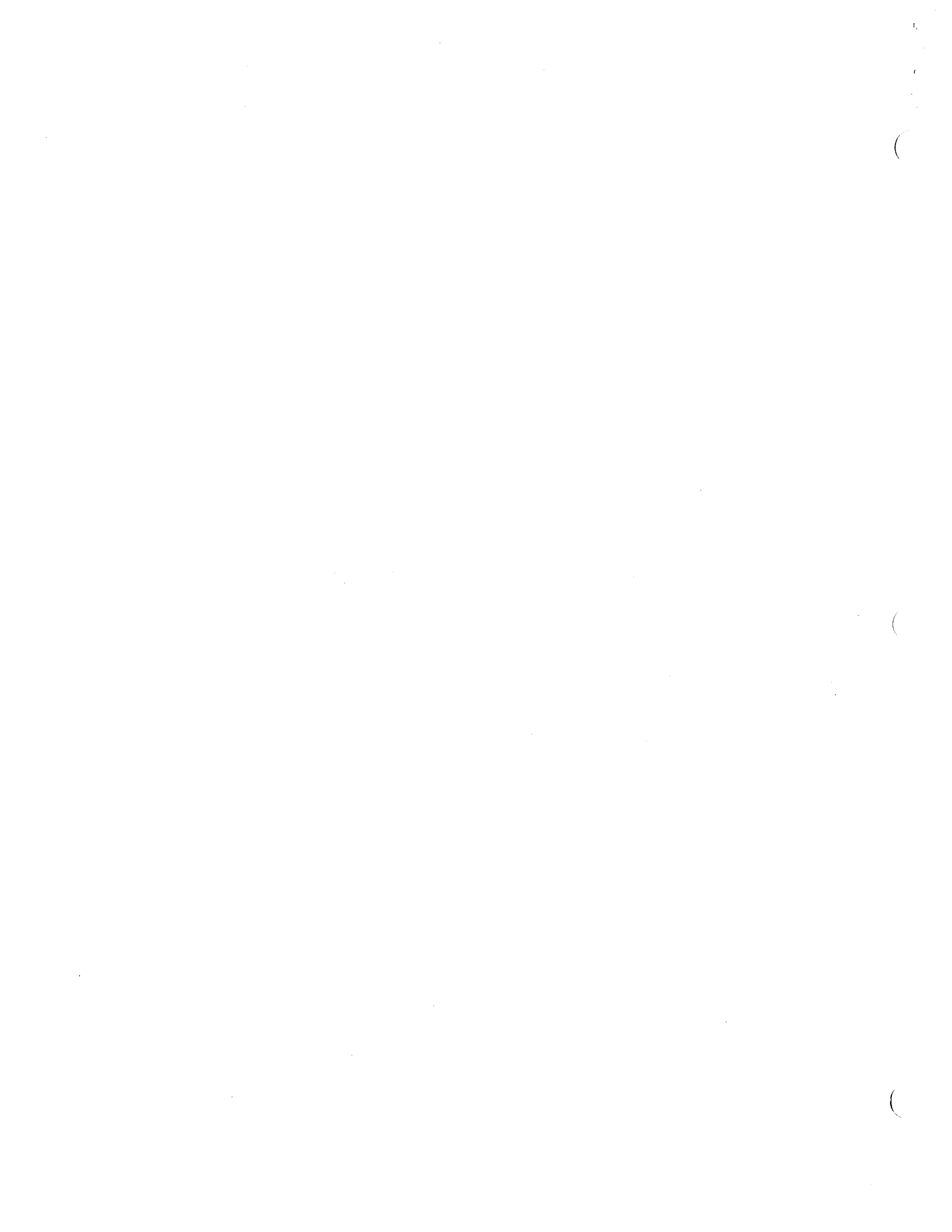
6. $(6x - 10) - (2x - 8)$

7. $(4x - 3) - (2x + 7)$

8. $(5x - 4) - (2x + 3)$

9. A rectangle has side lengths $(x + 4)$ feet and $(2x - 2)$ feet. Write a linear expression in simplest form to represent the perimeter. Find the perimeter if the value of x is 7 feet.

10. The number of runs scored by the home team at a baseball game is represented by $(x + 7)$. The number of runs scored by the visiting team is represented by $(3x - 7)$. Write an expression to find how many more runs the home team scored than the visiting team. Then evaluate the expression if the value of x is 6.



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PERIOD

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Lesson 6 Homework Practice

Add Linear Expressions

Add. Use models if needed.

1. $(9x + 7) + (x + 3)$

2. $(-4x + 6) + (x - 5)$

3. $(-3x + 15) + (-3x + 2)$

4. $(-2x + 10) + (-8x - 1)$

5. $(-2x + 4) + (x - 11)$

6. $(8x + 9) + (-6x - 1)$

7. $(-6x + 3) + (5x - 4)$

8. $(2x - 4) + (-x + 9)$

9. $(-8x + 2) + (-5x + 7)$

10. $(-4x - 2) + (13x + 1)$

11. $(-7x - 14) + (x - 6)$

12. $(12x + 3) + (-7x + 5)$

13. $(4x - 1) + (-5x + 17)$

14. $(-9x + 2) + (-8x - 2)$

15. $(1.3x + 2.4) + (-6.1x - 3.2)$

16. $(0.5x - 0.6) + (0.75x - 0.1)$

17. **GEOMETRY** A rectangle has side lengths of $(3x + 6)$ inches and $(2x - 4)$ inches. Write an expression to represent the perimeter of the rectangle. Then find the value of x if the perimeter is 94 inches.

18. **CRUISE SHIPS** The table shows the number of cruise ships in a harbor on various days.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Number	$x - 4$	$x + 9$	$2x$	$3x - 7$	4

- a. Write an expression for the total number of cruise ships in the harbor on Monday and Tuesday.
- b. Write an expression for the total number of cruise ships in the harbor on all 5 days.

