

LESSON
1-7 **Problem Solving**
Simplifying Expressions

Write the correct answer.

1. An English teacher gives students 1 point for reading a magazine article, 5 points for reading a chapter of a book, and 20 points for completing an entire book. If Sue reads 4 magazine articles, 7 chapters, and completes 2 books this term, how many points will she earn?

2. A recipe for chocolate chip cookies calls for $2\frac{1}{2}$ cups of flour, 1 cup of butter, $\frac{1}{2}$ cup of brown sugar, $\frac{3}{4}$ cup of sugar, and 1 cup of chocolate chips. Find the total number of cups of ingredients.

3. A rectangular desktop has a length of $3(x + 2)$ units and a width of $x - 7$ units. Write an expression, in simplified form, for the perimeter of the desktop.

4. Lucy is k years old. She has a sister who is three years younger than she is and another sister who is five years less than twice Lucy's age. Write an expression, in simplified form, for the sum of the three girls' ages.

Use the table below for questions 5 – 7, which shows expected flight times to and from New York City and five other cities. The legs of each trip vary in time due to the wind. Select the best answer.

Expected Flight Times

City	Inbound (h)	Outbound (h)
Mexico City	5.5	4.5
Paris	7.25	8.0
San Diego	5.4	4.75
Atlanta	2.3	2
Rome	7.75	8.5

5. Find the sum of the expected outbound flight times.

A 23 h	C 27.75 h
B 26 h	D 28.25 h
6. If Marty plans to travel from New York to Paris and back in February, and then from New York to Rome and back in April, what will be his total flight time for both trips?

F 15.25 h	H 31.0 h
G 16.25 h	J 31.5 h
7. Juan's flight time to San Diego was x hours longer than expected. His flight back was y hours less than expected. Which expression shows Juan's total flight time?

A $10.15xy$	C $10.15 + x - y$
B $5.4x - 4.75y$	D $5.4x(4.75y)$
8. Last month, Heather flew from New York to Atlanta and back twice a week for 3 weeks. What was her total flight time if there were no delays?

F 12.9 h	H 19.8 h
G 13.8 h	J 25.8 h