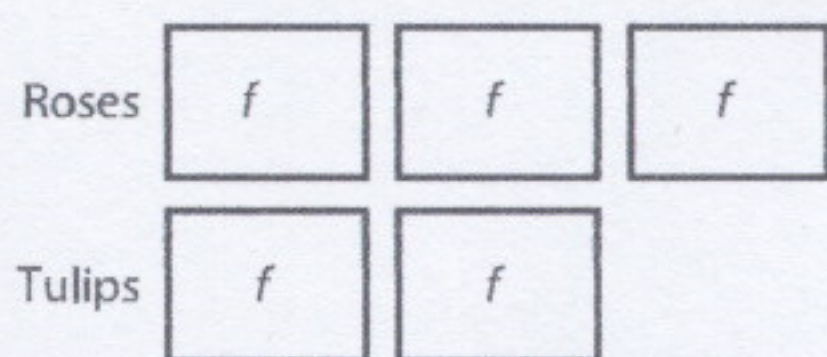# Understand
Solutions to Equations

Name: _____

**Study the example problem showing how to write
equivalent expressions. Then solve problems 1–8.**

Example

Gail plants 3 pots of roses and 2 pots of tulips. The
number of flowers in each pot is the same. Write an
expression for the total number of flowers. Simplify the
expression to create an equivalent expression.

You can use math tiles to represent the problem.

Roses | f | f | f

Tulips | f | f

Add to find the total number of flowers. An expression for
the total number of flowers is $3f + 2f$. Then simplify.

$$3f + 2f = f(3 + 2) = 5f$$

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1 Look at the example. What does f represent?

_____

2 Tell what each expression below represents.

a. $3f$ _____

b. $2f$ _____

c. $3f + 2f$ _____

3 How was the distributive property used to create
an expression that is equivalent to $3f + 2f$?

_____

Vocabulary

like terms terms in an
expression that have the
same variable raised to
the same power.
Constants are like terms.

x and $-4x$

1 and 1.5

x^2 and $8x^2$

Solve.

4. David says that he can apply the commutative and distributive properties to $7s + 8 + 5s$ to get $12s + 8$. Is he correct? Explain.

_____

_____

_____

5. Use three of the terms below to fill in the two expressions. Each term may be used only once. Both of your expressions must be equivalent to $0.5x + 1.5$.

0.5	2	x	0.25x	3	0.75

_____ (_____ + _____)

_____ (_____ + _____)

6. Write a story that you could represent with the expression $8b + 4b - 2$. Then write an expression that is equivalent to $8b + 4b - 2$.

_____

_____

_____

_____

7. Is $d(10 + 20)$ equivalent to $d \times 10 + 20 \times d$? Use a property, or properties, to explain.

_____

_____

_____

8. Use the distributive property to write an expression that is equivalent to $45 + 30x$.

_____