

Equivalent Expressions

Solve the problems.

- 1 Are $5n + 9 + n$ and $3(2n + 9)$ equivalent expressions? Use substitution to check your answer.

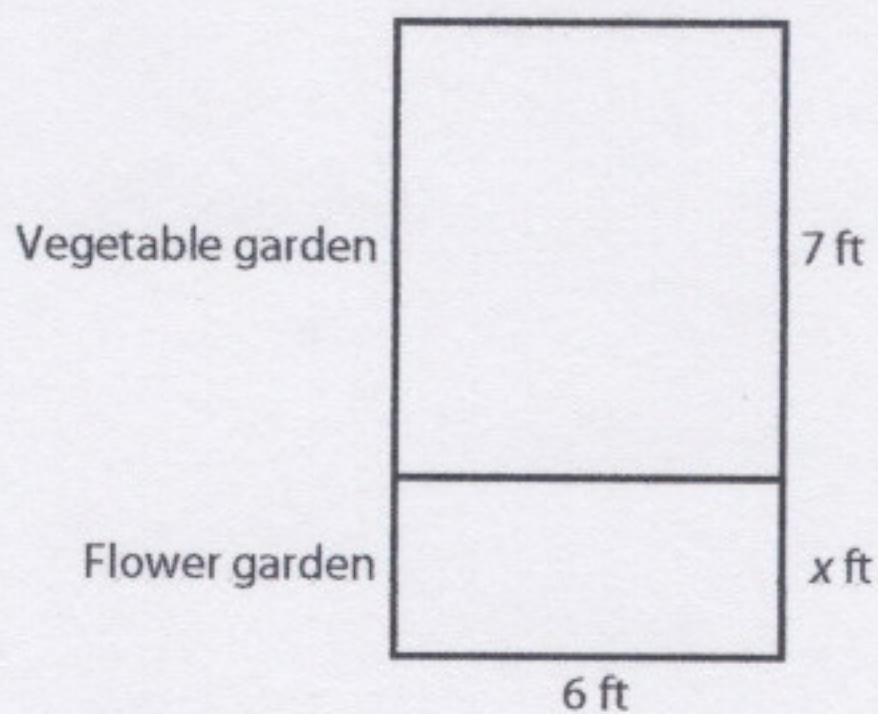
Show your work.

What value will you substitute for n to check your answer?



Solution: _____

- 2 The picture shows the dimensions of a vegetable garden and a flower garden.



How do you find the area of a rectangle?



Which expression represents the combined area of the gardens in square feet? Select all that apply.

- A $42 + 6x$
 B $(6 \cdot 7) + (6 \cdot x)$
 C $13 + 6 + x$
 D $6(7 + x)$

William chose **C** as a correct answer. How did he get that answer?



Solve.

3 Look at the expression $\frac{1}{2}(c + 8)$. Tell whether each statement about the expression is *True* or *False*.

- a. $\frac{1}{2}(c + 8)$ and $\frac{c + 8}{2}$ are equivalent expressions. True False
- b. $\frac{1}{2}(c + 8)$ and $\frac{1}{2}c + 4$ are equivalent expressions. True False
- c. The only terms in $\frac{1}{2}(c + 8)$ are c and 8 . True False
- d. You can multiply c and 8 by $\frac{1}{2}$ in $\frac{1}{2}(c + 8)$ to find an equivalent expression. True False

How do you know that expressions are equivalent?



4 The expressions $a(8x + 7)$ and $4x + 3.5$ are equivalent. What is the value of a ?

Show your work.

Look at the expressions. Do you have to distribute a to find its value?



Solution: _____

5 Which expression is equivalent to $6 + 7n + 4 + 8n$? Select all that apply.

- A** $13n + 12n$
- B** $5(3n + 2)$
- C** $5(3n + 10)$
- D** $15n + 10$

How can you use the distributive property to find equivalent expressions?

