

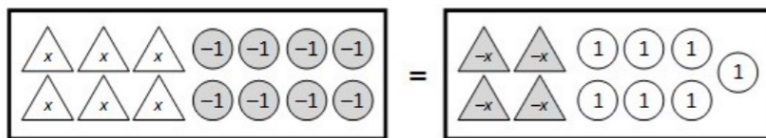
8.8C Model and Solve One Variable Equations

Some questions (c) 2017 by TEKS Resource System.

Some questions (c) 2017 by Region 10 Educational Service Center.

Some questions (c) 2017 by The Texas Education Agency.

1 An equation is represented by the model below.



What is the value of x that makes the equation true?

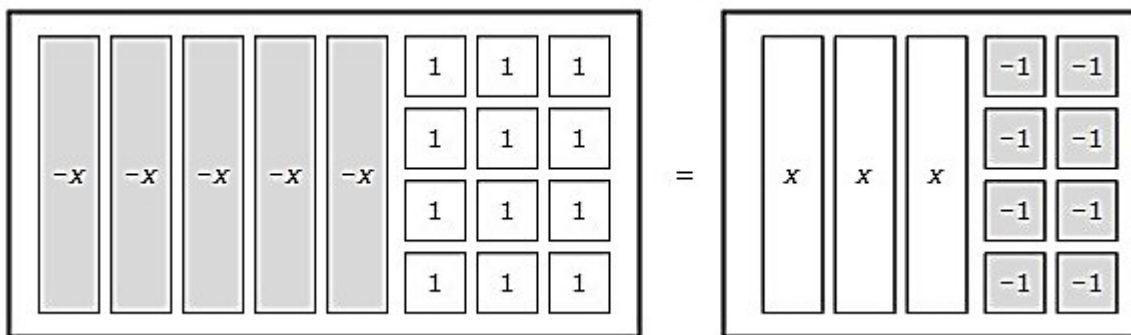
A $x = 7\frac{1}{2}$

B $x = 1\frac{1}{2}$

C $x = -\frac{1}{10}$

D $x = \frac{2}{3}$

2 The model represents an equation.



What value of x makes the equation true?

A -0.5

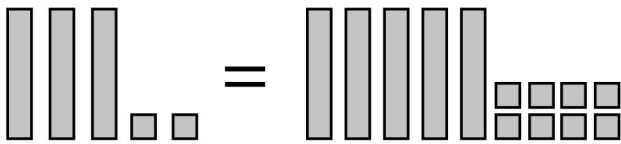
B 10

C 0.4

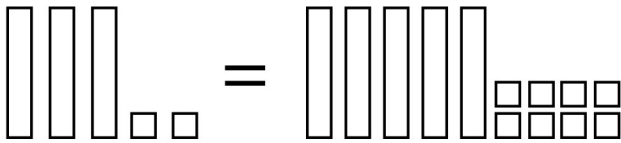
D 2.5

3 Identify the model that can be used to solve the equation $3x + 2 = 5x - 8$

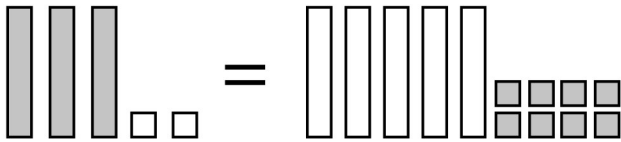
A



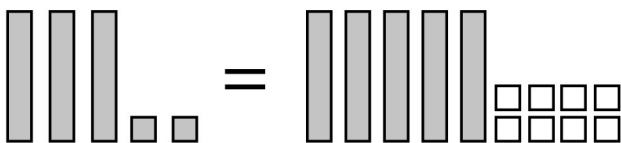
B



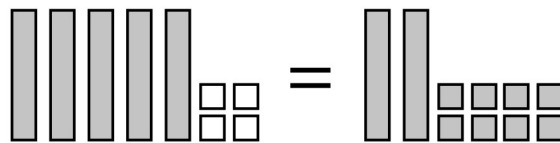
C



D



4 Use the model shown to solve for the variable.



5 What is the solution to this equation?

$$2x + 3 = x - 4$$

6 What value of x makes the equation true?

$$9.68x + 21.6 - 6.23x = 2.3x + 17$$

7 Justin, William, Sherice, and Cynthia solved the equation below on their math test.

$$\frac{15}{4}x - 2 = \frac{7}{2}x + \frac{13}{4}$$

Justin got an answer of 2.625. William got an answer of 5. Sherice got an answer of 21. Cynthia got an answer of 15. Who was correct?

- A Justin
- B William
- C Sherice
- D Cynthia

8 The measures of two angles are $(4x + 39)^\circ$ and $(16x - 12)^\circ$. What is the value of x that will make the two angles congruent?

- A 4.25
- B 2.55
- C 1.35
- D 2.25

- 9** Buffalo Bart's Endless Wings charges \$5.60 for sides and a drink, and then \$0.40 per chicken wing. The Spicy Chicken charges \$10 for sides and a drink, and then \$0.20 per chicken wing. About how many chicken wings must be purchased so that the total cost at Buffalo Bart's Endless Wings and The Spicy Chicken is the same?
- A** 78
B 31.2
C 22
D 26
- 10** Carnival M charges an entrance fee of \$5.00 and \$0.65 per ticket for the rides. Carnival P charges an entrance fee of \$10.00 and \$0.45 per ticket for the rides. How many tickets must be purchased in order for the total cost at Carnival M and Carnival P to be the same?
- A** 25
B 10
C 50
D 75

11 Henry and his brother each start a savings account. Henry begins with \$200 and deposits \$25 each month. His brother begins with \$150 and deposits \$35 each month. After how many months will the two brothers have the same amount in their savings account?

12 The sum of one-half a number and 7 is twice the number minus 5. What is that number?