NAME _____ DATE _____ PERIOD _____

Test, Form 3A

SCORE _____

1. Susan is 5 years older than her sister. The sum of their ages is 51. Define a variable. Then write an equation that could be used to find their ages. **1.** _____

2. Two beakers plus their contents have a mass of 180.4 grams. The total mass of the contents is 56.8 grams. Write and solve an equation to find the mass of one beaker. **2.** _____

3. At a concert, you purchase 3 T-shirts and a concert program for a total cost of $90. The program costs $15 and the T-shirts all cost the same. Write and solve an equation to find the cost of one T-shirt. **3.** _____

Solve each equation.

4. $-1.4d = 0.7$ **4.** _____

5. $1\frac{2}{3}m + 2 = 2\frac{1}{6}$ **5.** _____

6. $-14.2 = -4.2g + 6.8$ **6.** _____

7. $-w = -10 + 4w$ **7.** _____

8. $\frac{3}{4}n = -1\frac{3}{4}n - 18$ **8.** _____

9. $-3.6b - 7.2 = -12.7 - 6.1b$ **9.** _____

10. An online movie streaming plan charges an annual fee of $45 plus $2.50 per movie watched. Another plan has no annual fee but charges $3.75 per movie watched. For how many movies is the cost of the plans the same? **10.** _____

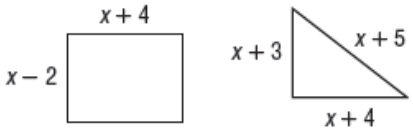
NAME _____ DATE _____ PERIOD _____

Test, Form 3A *(continued)*

SCORE _____

11. Find the value of x so that the polygons have the same perimeter.

11. _____



Solve each equation.

12. $-50 = -2(a + 3)$ **12.** _____

13. $4(x - 2) = 2(x - 4) + 2x$ **13.** _____

14. $5(y - 2) - 2 = 2(y + 1) - 5$ **14.** _____

15. $-4(p + 1) = 2(8 - 2p)$ **15.** _____

16. The table shows the number of points scored by three players in last night's basketball game. If Gil and Darby scored the same number of points, how many points did Josiah score?

Player	Points
Josiah	x
Darby	$2x + 8$
Gil	$3x - 4$

16. _____

17. The table shows the number of tulip bulbs Chloe and Grady planted. If they each planted the same number of bulbs, how many did each plant?

Name	Number of Bulbs
Chloe	$3(t + 1)$
Grady	$3(2t - 3)$

17. _____

18. Tony and some friends went to the movies. They bought 4 drinks and 2 tubs of popcorn and spent a total of $32.50 on the food. Each drink costs $3.50 less than a tub of popcorn.

a. Define a variable. Write an equation that can be used to find the cost of one tub of popcorn. **18a.** _____

b. Solve the equation to find the cost of a tub of popcorn. **18b.** _____