Name:_____ Class Period:_____

Ch 3.3 worksheet

Solve each equation. Check your answer. If appropriate, write identity or no solution.

1. $7 - 2n = n - 14$
2. $4(b - 1) = -4 + 4b$
3. $6 - 3d = 5(2 - d)$
4. $6t = 3(t + 4) - t$
5. $\frac{2}{3}a - \frac{3}{4} = \frac{3}{4}a$
6. $3(2f + 4) = 2(3f - 6)$
7. $3(n - 1) = 5n + 3 - 2n$
8. $4.3v - 6 = 8 + 2.3v$
9. $\frac{1}{2}d - \frac{3}{4} = \frac{3}{5}d$
10. $8(2f - 3) = 4(4f - 8)$
11. $6y + 9 = 3(2y + 3)$

Write an equation to model each situation. Then solve.

12. Hans needs to rent a moving truck. Suppose Company A charges a rate of $40 per day and Company B charges a $60 fee plus $20 per day. For what number of days is the cost the same?

13. Suppose a video store charges nonmembers $4 to rent each video. A store membership costs $21 and members pay only $2.50 to rent each video. For what number of videos is the cost the same?

14. Suppose your club is selling candles to raise money. It costs $100 to rent a booth from which to sell the candles. If the candles cost your club $1 each and are sold for $5 each, how many candles must be sold to equal your expenses?

15. Ace Truck Rental charges $54.00 a day plus 9¢ per mile. Roni's Truck Rental charges $38.00 a day plus 13¢ per mile. For how many miles will the cost of renting a truck for one day at Ace equal the cost at Roni's?
A. 40 mi B. 170 mi C. 400 mi D. 418 mi

16. A record store sells CDs for $12.00 each. A music club offers 5 free CDs and charges $15.00 for each additional CD. Which equation can you use to find the number of CDs x that would cost the same under both plans?
A. $15x - 5 = 12x$ B. $12x - 5 = 15x$
C. $12x = 15(x - 5)$ D. $12(x - 5) = 15x$

17. The perimeters of the rectangle and the triangle below are equal. Find the value of x.
A. 6 B. 8 C. 10 D. 12