## Ch 3.3 worksheet

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

$$7 - 2n = n - 14$$

$$2. \quad 4(b-1) = -4 + 4b$$

$$3. \quad 6 - 3d = 5(2 - d)$$

$$4 \quad 6t = 3(t+4) - t$$

4. 
$$6t = 3(t+4) - t$$
 5.  $\frac{2}{3}a - \frac{3}{4} = \frac{3}{4}a$ 

6. 
$$3(2f + 4) = 2(3f - 6)$$
  
9.  $\frac{1}{2}d - \frac{3}{4} = \frac{3}{5}d$ 

7. 
$$3(n-1) = 5n + 3 - 2n$$
 8.  $4.3v - 6 = 8 + 2.3v$ 

8. 
$$4.3v - 6 = 8 + 2.3v$$

9. 
$$\frac{1}{2}d - \frac{3}{4} = \frac{3}{5}d$$

10 
$$8/2f - 3 = A(Af - 8)$$

10. 
$$8(2f - 3) = 4(4f - 8)$$
 11.  $6y + 9 = 3(2y + 3)$ 

Write an equation to model each situation. Then solve.

- 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?
- 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? C. 400 mi
  - A. 40 mi
- B. 170 mi

**B**. 8

- D. 418 mi
- 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?

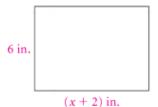
**A.** 
$$15x - 5 = 12x$$

**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



- C. 10
- D. 12