Mathematics
Algebra review

Name (Print): _____

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1. Find the value of the following expressions when n is 3:
   (a) (1 point)
   $$(3n - 11)^2 - 2n$$

   (b) (1 point)
   $$10 - 2n^2$$

2. Simplify the following:
   (a) (1 point) $3a + 5 - 8a - 8$

   (b) (1 point) $\frac{3}{2}(4a + 7) - \frac{1}{4}(6 - a)$

3. Alice has m marbles. Bob has five more than twice as many marbles as Alice. Cindy has half as many as the sum of Alice and Bob's marbles.

   (a) (1 point) Express the number of Bob's marbles in terms of m.

   (b) (1 point) Express the number of Cindy's marbles in terms of m.

   (c) (1 point) If Alice has 17 marbles, how many marbles does Cindy have?

4. Solve the following equations for x:

   (a) (1 point)

$$6x - 7 = 31$$

   (b) (1 point)

$$2(3x + 5) - 4(2x - 5) = 7$$

   (c) (1 point)

$$\frac{2x + 5}{6} - \frac{3x - 1}{10} = \frac{3x - 8}{15}$$

5. (4 points) Alice and Bob started with the same number of marbles. Alice bought 6 more marbles, then gave away half of her marbles. She was given 3 more marbles, then tripled the number of her marbles by winning some in a game. Bob doubled his marbles by winning a game, then gave away 19 marbles. At the end, Alice found she had 1 more than twice Bob's marbles. How many marbles did they each start with?