

Algebra 1 PS01: Equations

**Directions:** Solve each of the following questions. Show your work on a separate sheet of paper

- 1) Solve for  $x$ :  $8x + 12 = 7x$
- 2) The following equation has a missing value:  $-2(2x - ?) + 1 = 17 - 4x$ 
  - a) If  $x = 0$ , what would the missing value be?
  - b) If  $x = 4$ , what would the missing value be?
- 3) Solve for  $w$ :  $6w - 33 = 3(4w - 5)$
- 4) Suppose Jay-Z lets go of a red balloon 40 feet above the ground and it starts **rising** at 2 m/s. At the same exact time, Beyonce lets go of a blue balloon 60 feet above the ground, but she forgot helium so it starts **falling** down at 3 m/s. What height will the balloons be when they are at **the same height?**