Algebra – Solving Equations 1

Solve the following equations:

1. $2x = 6$

2. $3x - 1 = 11$

3. $6x + 1 = x - 4$

4. $5x - 6 = 3 + 2x$

5. $4(x + 1) = 16$

6. $5(2x - 1) = 2(x + 1)$

7. $5(3 - x) = 20$

8. $16x - 5 = 3(x + 7)$

9. Jack and Jill are siblings. Jack was 4 when Jill was born. If jack is now twice as old as Jill, how old is Jack?

10. Samantha has $3.70 in her wallet made up entirely of 50c and 20c coins. How many of each does she have if she has 11 coins in total?

11. Mary and Steven each buy a bicycle. Mary pays $40 more than Steven for her bicycle. If they spend $200 in total, how much does Steven pay for his bike?

12. Find the value of each of p in the following expressions, given that s = 1.2 and h = 4:

    a. $2s = 3hp$

    b. $\frac{h}{2} = \sqrt[2]{sp}$

    c. $\frac{7h}{p} = s$

13. Sketch solutions to each of the following inequalities on separate number lines:

    a. $3x \leq 12$

    b. $4(x + 1) \geq 40$

    c. $\frac{3x-2}{5} \leq 3$