4-8. Approximately $f = 58 + 7a$, where f is the final exam score (in precent) and a is the AP score; about 79%

4-9. See below:

a. no solution

b. $x = 13$

4-10. $(-1, 3)$

4-11. Cadel is correct because he followed the exponent rules. Jorge is incorrect; the problem only contains multiplication, so there are not two terms and the Distributive Property cannot be used. Lauren did not follow the exponent rules.

4-12. See below:

a. $3y(y - 4) = 3y^2 - 12y$

b. $(3y + 5)(y - 4) = 3y^2 - 7y - 20$

4-13. No; 2 is a prime number and it is even.

4-14. If x = the length, $2(x) + 2(3x - 1) = 30$ width is 4 in., length is 11 in.

4-15. Lakeisha, Samantha, Carly, Barbara, and Kendra

4-16. She combined terms from opposite sides of the equation. Instead, line 4 should read $2x = 14$, so $x = 7$ is the solution.

4-17. This statement is sometimes true. It is true when $x = 0$, but otherwise it is false because the Distributive Property states that $a(b + c) = ab + ac$. Students can also justify this with a diagram of algebra tiles.

4-18. $y = \frac{1}{2}x + \frac{5}{2}$

4-19. See below:

a. $6x^2 - x - 2$

b. $6x^3 - x^2 - 12x - 5$