SM2 HW #5-3 (Factor Trinomials, lead coefficient is not '1')

For each of the following equations:
a) What is the y-intercept?
b) Factor each completely.
c) What are the x-intercepts?

1) $y = 7x^2 + 17x - 12$

2) $y = 7x^2 - 69x + 54$

3) $y = 2x^2 - 23x + 45$

4) $y = 3x^2 + 8x + 4$

5) $y = 7x^2 - 67x - 30$

6) $y = 2x^2 + 11x + 12$

7) $y = 6x^2 - 55x + 9$

8) $y = 10x^2 + 51x + 5$

9) $y = -2(x + 3)^2 - 4$

    a) Describe the transformation of the parent function

    b) What is the range of the function?
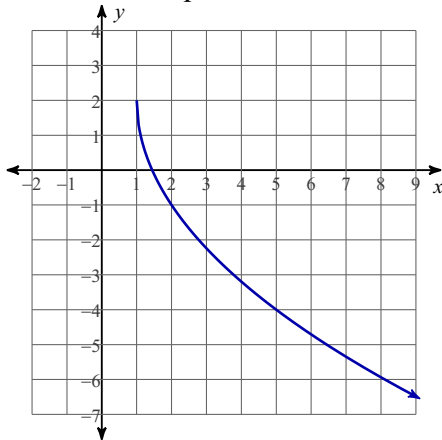
10) $y = -4 + 3\sqrt{x + 1}$

    a) What is the "endpoint"?

    b) What is the domain?

    c) What is the range?

11) What is the equation of a line that passes through: $(1,\ 6)$ and $(-3,\ 14)$

12) What is the equation?

13) What is the equation?