Algebra 3-4 Name_____

Solving by Factoring #1

Date_____ Period____

First: Solve each equation by factoring. Second: Solving by graphing and finding intersections.

1) $5n^2 + 5n - 63 = -3$

2) $b^2 - 4b - 5 = -5$

3) $3x^2 + 3x - 13 = 5$

4) $5x^2 + 15x - 3 = -3$

5) $5x^2 - 15x = -10$

6) $4n^2 = 12 + 8n$

7) $3x^2 - 45 = 6x$

8) $k^2 + k = 12$

9) $5x^2 + 22x = -21$

10) $15 - 13x = -2x^2$

11) $3x^2 + 26x = -35$

12) $-240 = -56a^2 - 296a$

13) $25n^2 + 112n + 140 = -7n + 4n^2$

14) $4p^2 + 6p - 9 = -3p^2 - 8$

15) $34v^2 - 126v + 36 = 4 - 6v + 6v^2$

16) $12v^2 + 63v = 240 - 3v$

17) $80n^2 - 159n = -7n - 48$

18) $35b^2 = 33b + 8$

19) $3m^2 + 10 = -11m$

20) $6k^2 - 8k + 1 = -1$

Answers to Solving by Factoring #1

1) $\{3, -4\}$
2) $\{4, 0\}$
3) $\{-3, 2\}$
4) $\{-3, 0\}$
5) $\{2, 1\}$
6) $\{-1, 3\}$
7) $\{5, -3\}$
8) $\{-4, 3\}$
9) $\left\{-\frac{7}{5}, -3\right\}$
10) $\left\{\frac{3}{2}, 5\right\}$
11) $\left\{-\frac{5}{3}, -7\right\}$
12) $\left\{\frac{5}{7}, -6\right\}$
13) $\left\{-\frac{5}{3}, -4\right\}$
14) $\left\{\frac{1}{7}, -1\right\}$
15) $\left\{\frac{2}{7}, 4\right\}$
16) $\left\{\frac{5}{2}, -8\right\}$
17) $\left\{\frac{2}{5}, \frac{3}{2}\right\}$
18) $\left\{-\frac{1}{5}, \frac{8}{7}\right\}$
19) $\left\{-\frac{5}{3}, -2\right\}$
20) $\left\{\frac{1}{3}, 1\right\}$