Algebra II Name _____

Section 5-1 Review

Factor the following using any of the methods we have discussed. These are not equations, you do not need to solve for the variable. Do the factoring only.

1) $n^2 - 100$

2) $x^2 + 11x + 28$

3) $2y^5 - 8y^4$

4) $12x^2 + 23x - 9$

5) $a^2 - 16ab + 64b^2$

6) $w^3 + 125$

7) $5x^2 + 5x - 60$

8) $6a^2b + 2ab + 20ab^3$

9) $4r^3 - 9r$

Give the roots (solutions or answers) to the following "pre-factored" equations or graphs. There should be NO WORK to do!!!!

10) $(x - 8)(x + 12) = 0$

$x =$ _____

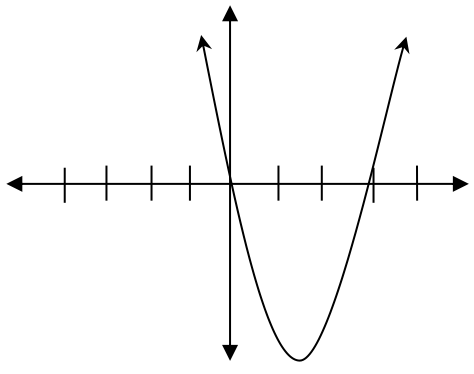
11) $(2y - 5)(3y - 2) = 0$

$y =$ _____

12) $5b(b + 2) = 0$

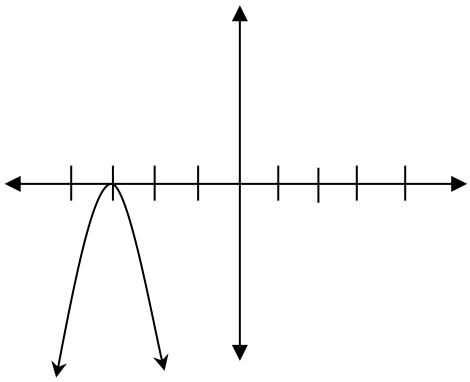
$b =$ _____

13)



Root(s): _____

14)



Roots(s): _____

Solve the following equations by **factoring** first, then stating the solutions (or roots).

15) $a^2 - 17a + 72 = 0$

16) $9y^3 - 36y^2 = 0$

17) $n^2 + 18n = -81$

18) $15x^2 + 43x + 8 = 0$

19) $d^2 - 14 = 5d$

20) $100m^2 - 1 = 0$

Write a quadratic equation with the given roots (solutions or answers). Use whatever variable you like.

EXAMPLE: Roots: -6 and 3

If x = -6, then the ( ) would be (x + 6), if x = 3 then the ( ) would be (x – 3)
Now, simply multiply (FOIL) them out:

$(x + 6)(x - 3)$
$x^2 - 3x + 6x - 18$
$x^2 + 3x - 18$

Lastly, add = 0 on the end to make it an equation **$x^2 + 3x - 18 = 0$**

21) Roots: 7 and -7

22) Roots: -5 and $-\frac{2}{3}$

23) Roots: 0 and -12

24) Roots: $\frac{1}{4}$ and $\frac{4}{3}$