

Name: _____

10.5 CA Solve Quadratic Equations by Factoring

Factor Out GCF First and then Factor the Trinomials

1. ~~Factor~~ $6x^2 + 9x - 27$.

2. $3x^2 - 300$

3. $8m^2 + 28m - 120$

4. $-7t^2 - 63t$

5. $-25y^2 + 60y - 35$

6. $49 - r^2$

7. $200 + 10x - x^2$

Find the roots (or Zeros) of the equations below.

8. $x^2 - 5x - 36 = 0$

9. $4x^2 - 17x - 15 = 0$

Solve the equation.

10. $0 = x^2 - 8x - 20$

11. $x^2 - 2x = 0$

12. $7m^2 + 45m + 22 = 4$

13. $n^2 = -10n - 24$

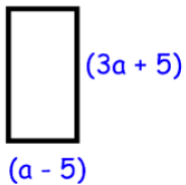
14. $-17r = -7r^2 + 12$

15. $x^2 + 2x - 22 = -7$

16. $x^2 - 5x = 24$	17. $x^2 - 9x = 0$
18. $8x^2 - 15x + 39 = 7x^2 + 7 - 3x$	19. $3y^2 + 22y + 60 = -14y - 48$
20. $20 - 31n = -15n^2 + 6n$	21. $s(s + 1) = 72$

22. Find the dimensions of the rectangle that has the given area.

Area = 23 square inches



21. A city wants to double the area of a rectangular playground that is 72 feet by 48 feet by add the same distance x to the length and the width. Write and solve an equation to find the value of x .

Picture: