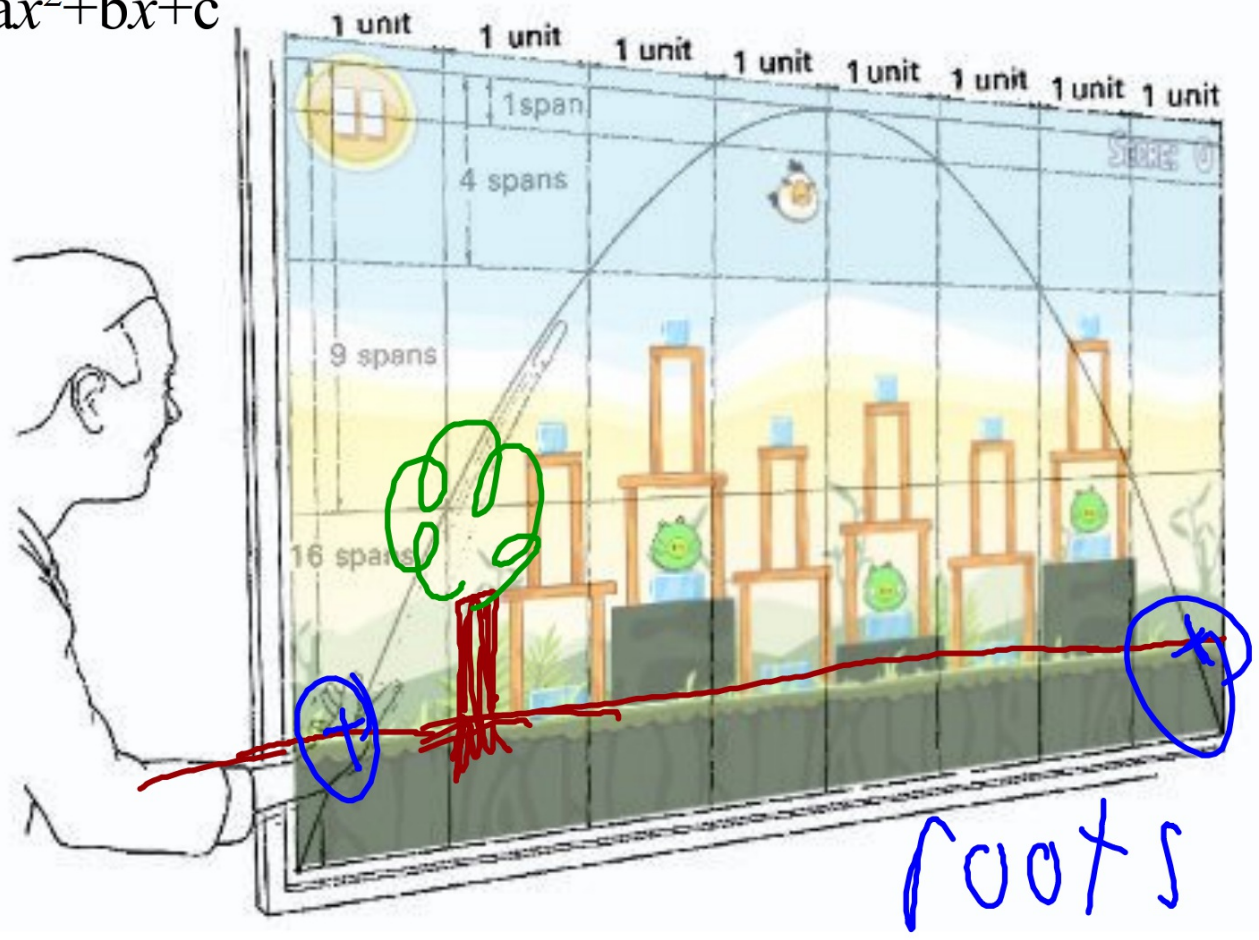


$$y = ax^2 + bx + c$$



15. $x^2 + 8x = -15$

16. $t^2 - 3t = 28$

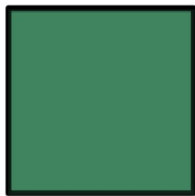
17. $n^2 = 6n$

18. $2c^2 - 7c = -5$

19. $3q^2 + 16q = -5$

20. $4y^2 = 25$

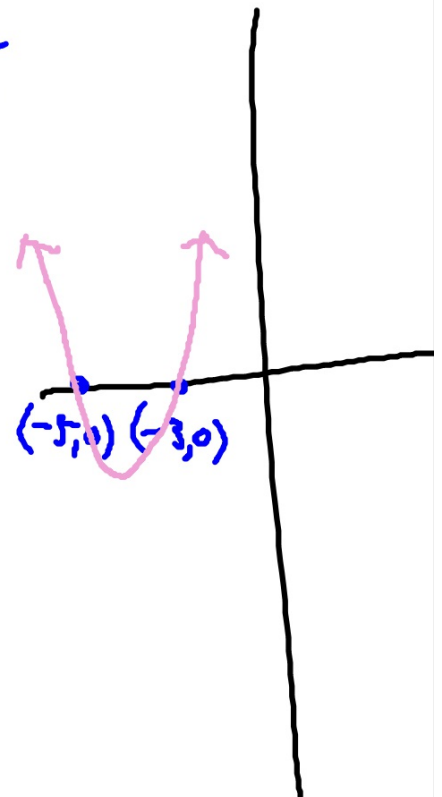
21. The sides of a square are all increased by 3 cm. The area of the new square is 64 cm^2 . Find the length of a side of the original square.



$$x^2 + 8x = -15$$

$$x^2 + 8x + 15 = 0$$

$$(x+5)(x+3) = 0$$



15. $x^2 + 8x = -15$

16. $t^2 - 3t = 28$

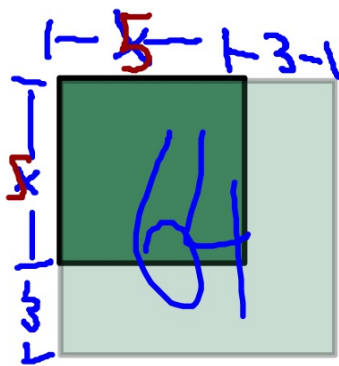
17. $n^2 = 6n$

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21. The sides of a square are all increased by 3 cm. The area of the new square is 64 cm^2 . Find the length of a side of the original square.



$$(x+3)(x+3) = 64$$

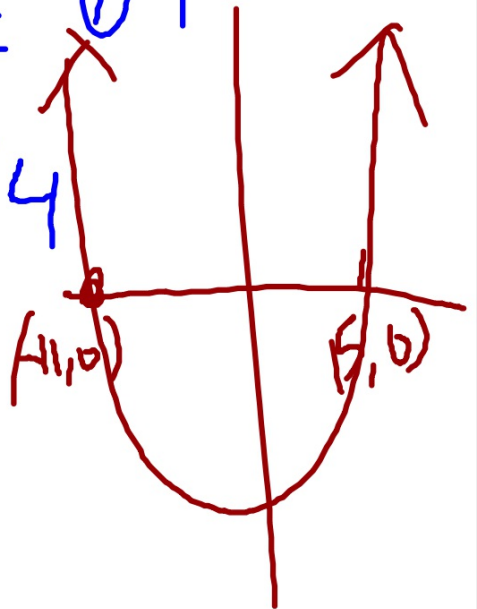
$$x^2 + 6x + 9 = 64$$

$$x^2 + 6x - 55 = 0$$

$$(x+11)(x-5) = 0$$

~~$$x = -11$$~~

$$x = 5$$



Use the Zero-Product Property to solve each equation.

1. $(x - 3)(x - 7) = 0$ 2. $(x + 4)(2x - 9) = 0$ 3. $t(t + 1) = 0$
4. $-3n(2n - 5) = 0$ 5. $(7x + 2)(5x + 4) = 0$ 6. $(4a - 7)(3a + 8) = 0$

Factor each polynomial. Then solve using the Zero-Product Property.

7. $x^2 + 7x + 10 = 0$ 8. $k^2 + 7k + 12 = 0$

Solve by factoring.

9. $b^2 + 3b - 4 = 0$ 10. $m^2 - 5m - 14 = 0$ 11. $w^2 - 8w = 0$
12. $x^2 - 16x + 55 = 0$ 13. $k^2 - 3k - 10 = 0$ 14. $n^2 + n - 12 = 0$
15. $x^2 + 8x = -15$ 16. $t^2 - 3t = 28$ 17. $n^2 = 6n$
18. $2c^2 - 7c = -5$ 19. $3q^2 + 16q = -5$ 20. $4y^2 = 25$

21. The sides of a square are all increased by 3 cm. The area of the new square is 64 cm^2 . Find the length of a side of the original square.

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21. The sides of a square are all increased by 3 cm. The area of the new square is 64 cm^2 . Find the length of a side of the original square.

Find the roots of the parabola.

$$y=x^2-5x-14$$

23. You are building a rectangular wading pool. You want the area of the bottom to be 90 ft^2 . You want the length of the pool to be 3 ft longer than twice its width. What will the dimensions of the pool be?

x  $x(2x+3) = 90$

25. The product of two consecutive numbers is 14 less than 10 times the smaller number. Find each number.

x small $x(x+1) = 10x - 14$
 $x+1$ bigger

$$y = x^2 + 10x + 21$$

$$(-5)^2 + 10(-5) + 21$$

$$25 - 50 + 21$$

$$x = -5$$

$$-4$$

$$(-5, -4)$$

