7. Algebra 1: Quadratic Ed	
Study Guide	MRS. WILSON
1. Simplify √64	2. Simplify $\sqrt{\frac{4}{49}}$
3. Solve: $3x^2 - 27 = 0$	4. Solve: $4x^2 + 10 = 110$
127 127	-10-10
3x2 = 27	4×2 5100
3 3	436
JX-J9 X===3	J X = 25 X = ±5
5. Solve for x. $\sqrt{(x-2)^2} = 25$	6. Solve for x. $(x+3)^2 + 9 = 58$
X-2=±5	$(x+3)^2 + 9 = 58$ -9
X-2/5 X-2/6-5	$(x+3)^2 = \sqrt{49}$ $x+3 \neq 7$ $x+3 \neq -3$ $x+3 = \pm 7$ $x=-10$
X=7 X=-3	X+3=±7 X=4 X=-10
7. Solve for x. $x^2 + 7x + 12 = 0$	8. Solve for x. $x^2 + 6x - 7 = 0$
2 12 X+3=0 X14=0	7-7-1 X+7=0 X-1=0
T/7 -3-3 -4 -4	x/6+ -7-7 +1+1
sday, April 7, 2020 X = -4	X=-7 X=1
9. Solve for x. $3x^2 - 8x + 5 = 0$	10. Solve for x. $4x^2 - 64 = 0$
=3/-5 34-83x X-1=0 3X-5=0 35+5	4×2=64 4×2=64
X=1 3 3	TX=16 X=+4



X=+4

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11. Describe the number of solutions:

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

$$6^{2}.4ac$$
 positive:
 $(-6)^{2}.4(1)6)$ 2 solutions

12. Describe the number of solutions:

$$x^2 + 6x + 9 = 0$$

Zem:

1 Solution

13. Solve by completing the square. Fill in Step 2 and Step

3.		12x - 13 =	(-)	12)	4-6	14	3
	x^2 —	12x - 13 =	= 0	2	7 -		•

	$x^2 - 12x - 13 = 0$
Step 1	$x^2 - 12x + 36 = +13 + 36$
Step 2	$(X - (a)^2 = U $

Step 3
$$x - 6 = \pm$$

Step 4 $x = -1$ and $x = 13$

14. Solve by using the quadratic formula.

$x^2 + 5x - 8 = 0$		
Step 1	$-(5)\pm\sqrt{(5)^2-4(1)(-8)}$	
	$\chi \equiv \frac{1}{2}$	
	2(1)	
Step 2	$-5 \pm \sqrt{(25) + (32)}$	
'	$x = \frac{-3 \pm \sqrt{(2 + 3) + (3 + 3)}}{2}$	
	2	
Step 3	$-5 \pm \sqrt{57}$	
	Y =	

Free Response

15. A model rocket is fired vertically into the air at 36 m/s. The expression $-9t^2 + 36t$ gives the rocket's height after t seconds. Find the number of seconds it takes for the rocket to reach the ground. h = 0

$$h = -97^{2} + 367$$

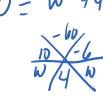
 $0 = -97^{2} + 367$
 $0 = -97^{2} + 367$

 $h = -97^{2} + 367$ $0 = -97^{2} + 367$ $0 = -97^{2} + 367$ $0 = -97^{2} + 367$ 0 = T T = 4 T =

16. A landscaper is designing a rectangular brick patio. She has enough bricks to cover 60 square feet. She wants the length of the patio to be 4 feet longer than the width. What dimensions should she use for the patio?



A=LW 60 = (W14)(W) 60= W2 14W-W



L=10 W=6

17. An artist is working on a rectangular painting with a length that is 8 inches longer than its width. The area of the painting is 48 square inches. What is the length and width of the painting?

48 = w (w+8)



L=W18=418=17

L=W18=418=12

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