Algebra RH			ANSWE	r key	HW: Age Word Problems					
1.				2.						
	Νοι	v Fu	ture (+5)		No	w	Pa	st (-3)		
Sammie	x + 1	15	x + 20	AI	2×	(2	2x - 3		
Friend	×		x + 5	Judy	×		:	x - 3		
x + 20 = $1.5(x + 5)$ x + 20 = $1.5(x + 5)$ x + 20 = $1.5x + 7.5$ 20 = $0.5x + 7.5$ 12.5 = $0.5x$ 25 = x 25 + 15 = 40 Sammie is 40 years old and her friend is 25				$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						
years old.										
3.				4.		r				
	Νοι	v Fu	ture (+x)		No	w	Future (+8)			
Man	40		40 + x	Jane	3×	(3x + 8			
Son	8		8 + x	Allison	X	X +		x + 8		
x = # of years in the future = 8 years 40 + x = 3(8 + x) 40 + x = 24 + 3x 40 = 24 + 2x 16 = 2x 8 = x				3x + 8 = 2(x + 8) + 14 3x + 8 = 2x + 16 + 14 3x + 8 = 2x + 30 x + 8 = 30 x = 22 3(22) = 66						
				Allison is 22 years old and Jane is 66 years old.						
5.				6.				· · · · · · · · · · · · · · · · · · ·		
	Now	Future	Past		Now	Futu	ire	Past		
		(+1)	(-1)			(+8	3)	(-3)		
John	X	x + 1	x - 1	Mark	x - 10	× -	2	x - 13		
Mike	20 - x	21 - x	19 - x	Larry	X	X +	8	x - 3		
x + 1 = 9(19 - x) x + 1 = 171 - 9x 10x + 1 = 171 10x = 170 x = 17 20 - 17 = 3				x + 8 = 4 + 2(x - 13) x + 8 = 4 + 2x - 26 x + 8 = 2x - 22 8 = x - 22 30 = x 30 - 10 = 20						
John is 17 year	s old and	John is 17 years old and Mike is 3 years old				Larry is 30 years old and Mark is 20 years old.				

7.			8.				
	Now	Future (+7)		Now	Future (+2)		
Bill	2x	2x + 7	Cindy	2x - 4	2x - 2		
Dan	×	x + 7	Melissa	×	x + 2		
2x + 7 = 1 2x + 7 = 1 0.5x + 7 = 1 0.5x = 3 x = 7 2(7) = 1	1.5(x + 7) 1.5x + 10.5 0.5 3.5 7 14	vears old	x + 2 = .75(2x - 2) $x + 2 = 1.5x - 1.5$ $2 = 0.5x - 1.5$ $3.5 = 0.5x$ $7 = x$ $2(7) - 4 = 10$ Maliesa is 7 years old and Circly is 10 years old				
9.		/ • • • • • • •	10.				
	Now	Past (-4)		Now	Past (-3)		
Sam	x - 8	x - 12	Jean	2x	2x - 3		
Mike	×	x - 4	Michelle	×	x - 3		
x - 12 + x 2x - 18	- 4 = 20 - 16 = 20 2x = 36 x = 18 - 8 = 10		2x - 3 + x - 3 = 45 3x - 6 = 45 3x = 51 x = 17 2(17) = 34				
Mike is 18 years	s old and Sam is	10 years old.	Michelle is 17 years old and Jean is 34 years old.				