Name:	
Date:	Per.:

Arithmetic Sequences in Context...Guided Practice WS

Directions: After each problem is given, there are a few guiding questions that should help you through the thought process of the problem. Answer these guiding questions, then you will get to the solution of the problem.

1.) Darnell has a jo	b and his s	aving his pa	aychecks ea	ach week.			
Weeks	1	2	3	4			
Savings	\$130	\$260	\$390	\$520			
In total, how much	-						
*How much has F	Ornall agus	d ofter the	first wook	. 2		The second week?	
					_	The second week? If you can see a pattern.	
						. y :	
*What is your first	torm in the	soguence	(2.12				
*What is your com							
*What is your n th t	erm? How	many wee	ks into the		are	e you looking for (n)?	
*Plug these values		a <i>rithmetic</i> : + (n – 1)(d		nd solve.			
	$a_n - a_1$	1 (11 – 1)(0	4)				
Darnell will have 2.) A new car costs							4 vears?
2.) A new car costs *What operation of	s \$13,000 ar	nd is depred	ciating by \$	\$900 each yea	ar.	. How much will the car be worth after	4 years?
2.) A new car costs *What operation of *How much is the	s \$13,000 ar loes "depre car worth a	nd is depred	ciating by \$	\$900 each yea	ar.		4 years?
2.) A new car costs *What operation of *How much is the The secon	s \$13,000 ar loes "depre car worth a	nd is deprec ciating" sug after the firs	ciating by \$ ggest? st year (no	\$900 each yea	ar. inr	. How much will the car be worth after	4 years?
2.) A new car costs *What operation o *How much is the The secon	s \$13,000 ar loes "depre car worth a	nd is deprec ciating" sug after the firs	ciating by \$ ggest? st year (no	\$900 each yea	ar. inr	. How much will the car be worth after ning, but after one year)?	4 years?
2.) A new car costs *What operation of *How much is the The secon *Write out the first *What is your first *What is your com	s \$13,000 ar loes "depre car worth a nd year? t few numbe term in the nmon differe ferm? How	ad is deprecedent of the second of this and the second of	ciating by \$ ggest? st year (no arithmetic s (a ₁)?	\$900 each year at the beginsequence under	ar. inr	. How much will the car be worth after ning, but after one year)?	4 years?

The car will be worth _____ after 4 years.

*Cost for first person to be photographed *Total cost for 2 peop	ple to be photographed *Total cost for 3 people
Do you see the arithmetic sequence above? Label the following pieces of the formula:	
n = a ₁ =	d =
*Plug these values into your arithmetic formula, and	solve.
It would cost a total of for	10 people to be photographed.
4) Th. 1 (0.450 H. F. 1)	
4.) The odometer on a car reads 60,473 miles. Every d after 20 days have passed?	ay, the car is driven 54 miles. What is the odometer reading
*Reading <u>after</u> the first day (NOT THE ORIGINAL MILEAGE)	*Reading after the second day *Reading after the third day
*Do you see the arithmetic sequence above?	
*Label the following pieces of the formula: n = a ₁ =	d =
11 –	u –
*Plug these values into your arithmetic formula, and	solve.
After 20 days, the odometer would read	miles total.
5.) Marie has \$180 in a savings account. She plans to any money from her account, what will her balance be	leposit \$12 per week. Assuming that she does not withdraw in 29 weeks?
*Amount of money in Marie's account after one week *Amount	of money after two weeks *After three weeks
*Plug the pieces into your arithmetic formula, and so	olve. Write your answer in a complete sentence.

3.) A photographer charges a fee of \$69.95 for one person. Each additional person in the picture is \$30. What is the

total charge if a group of 10 people wish to be photographed?

Name: 12/7/11 Per.: 12,4

Arithmetic Sequences in Context...Guided Practice WS

Directions: After each problem is given, there are a few guiding questions that should help you through the thought process of the problem. Answer these guiding questions, then you will get to the solution of the problem.

Weeks	1	2	3	4
Savings	\$130	\$260	\$390	\$520

*How much has Darnell saved after the first week? The second week? *Write out the first few numbers of this arithmetic sequence until you can see a pattern.
130,260 390
*What is your first term in the sequence (a ₁)? 135 *What is your common difference (d)? 135
*What is your nth term? How many weeks into the sequence are you looking for (n)?
*Plug these values into your arithmetic formula, and solve.
$a_n = a_1 + (n-1)(d)$

Darnell will have saved a total of 1430 after 11 weeks.

2.) A new car costs \$13,000 and is depreciating by \$900 each year. How much will the car be worth after 4 yea "What operation does "depreciating" suggest? "How much is the car worth after the first year (not at the beginning, but after one year)? The second year? "In Dand" "Write out the first few numbers of this arithmetic sequence until you can see a pattern.
*What is your first term in the sequence (a ₁)? $\frac{12.100}{100}$ *What is your common difference (d)? $\frac{12.100}{100}$ *What is your n th term? How many weaks into the sequence are you looking for (n)? $\frac{4}{100}$ *Plug these values into your arithmetic formula, and solve. $\alpha_4 = 12100 + (4-1)(-900)$ $\alpha_4 = 9400$
The car will be worth $\frac{\$9400}{}$ after 4 years.

5.) A photographer charges a fee of otal charge if a group of 10 people			in the picture is \$30. What is the
69.95	99.95	10	19.95
Cost for first person to be photographe	Total cost for 2 people to b	ne photographed *Total	cost for 3 people
Do you see the arithmetic sequence Label the following pieces of the	ence above? 1:45	d= 30	
Plug these values into your arith $\alpha_{10} = 6$	39.95)(30)	
would cost a total of #3	39.95 for 10 pc	eople to be photogra	phed.
i.) The odometer on a car reads 6 after 20 days have passed?	0,473 miles. Every day, th	e car is driven 54 mile	s. What is the odometer reading
*Plug these values into your ariti	ence above? $\frac{5000}{5000}$ e formula: = $\frac{00527}{00527}$ emetic formula, and solve = $\frac{00527}{00527}$ + $\frac{00527}{0052}$	d= -54 0-0(54)	*Reading after the third day
5.) Marie has \$180 in a savings ac any money from her account, wh			ning that she does not withdraw
*Amount of money in Marie's account a	fter one week *Amount of mo	aney after two weeks	After three weeks
*Plug the pieces into your arithm	= 192+ (20	9-10(12)	
Marie's bal be \$5:	ance at	ter 29 i	seeks will