Solving Inequalities

CHOOSE YOUR OWN ADVENTURE

Name _____

Date _____

In this assignment you will explore a mystery country. As you make choices and solve problems you will receive pieces of information about where in the world you are.

FACT FINDING

Solve each inequality. <u>The number in each simplified inequality is the clue.</u> (Choose 4 out of 5)

POPULATION (IN MILLIONS)	GDP (IN BILLIONS)	AREA (IN SQUARE KILOMETERS)	LIFE EXPECTANCY (IN YEARS)	YEAR OF INDEPENDENCE
$p + 5 \leq 16$	$\dfrac{G}{83} > 3$	$a - 120000 \leq 11960$	$4L \geq 322.8$	$-\dfrac{Y}{3} < -607$

FOOD OR FUN?

Solve each inequality. <u>The number in each simplified inequality is the clue.</u>
Use the *Decoder* to uncover the clues. (Choose a set of three problems.)

THINGS TO EAT		THINGS TO DO	
-Appetizer-	$5a + 7 > 16$	-See-	$-3b - 2 \leq 13$
-Entrée-	$\dfrac{-3x + 4}{2} < 9$	-Try-	$\dfrac{5y - 15}{4} > 20$
-Dessert-	$6 - 4(6m + 7) \geq 122$	-Visit-	$-1 - 6n - 6 \leq -11 - 7n$

FANTASTIC FINALE

MYSTERY A	MYSTERY B	MYSTERY C
Leah is riding in a cab that charges $2.00 for a ride plus $0.55 per mile. Since Leah only has $20, write an inequality and determine the number of miles she would be able to travel. Round to the nearest mile that will not exceed the limit.	Jimmy is eating appetizers that have 120 calories each. He only plans to eat 550 calories overall. Write an inequality and determine the most appetizers he can eat without exceeding the limit.	Celiza plans to buy souvenirs for her family on her trip. She has $150 to spend. She wants to buy a hoodie for herself that costs $60. She wants to spend the rest on shirts that cost $14 each. Write an inequality and determine the most shirts she can afford.

DECODER

Find the answers from the prior problems to retrieve the clues. Not all items in the Decoder will be used.

13/2	Africa	-5	Santorini Architecture	32.1	Pan for Gold
165	Tomb of T'Challa	-18	Ride a Horse	4	Petroleum Oils
-6	Melomakarona	6	Athens	1.8	Dakos Salad
-4	Acropolis	3.2	Minerals	10	Middle East
0	Cricket Match	-1.4	Rock of Gibraltar	19	Beaches of Crete
32	Europe	7/4	Empanadas	8	Rotisserie Chicken
1	Agriculture	-4.667	Pita with Gyros	5	Caprese Salad

WHERE IN THE WORLD?

THE COUNTRY PROFILE OF...

Capital City		Population
World Region		GDP
Chief Export		Area
Foods to eat		Life Expectancy
Things to do		Year of Independence

CHOOSE YOUR OWN ADVENTURE

Name _____

_____

ANSWER KEY

In this assignment you will explore a mystery journey. As you make choices and solve problems you will receive pieces of information about where in the world you are.

FACT FINDING

Solve each inequality. The number in each simplified inequality is the clue. (Choose 4 out of 5)

POPULATION (IN MILLIONS -- 2012)	GDP (IN BILLIONS -- 2012)	AREA (IN SQUARE KILOMETERS)	LIFE EXPECTANCY (IN YEARS -- 2012)	YEAR OF INDEPENDENCE
$P + 5 \leq 16$	$\frac{G}{83} > 3$	11960	$4L \geq 322.8$	$-\frac{Y}{3} < -607$
11	**249**	**13 50**	**80.7**	**1821**

FOOD OR FUN?

Solve each inequality. <u>The number in each simplified inequality is the clue.</u>
Use the *Decoder* to uncover the clues. (Choose a set of three problems.)

THINGS TO EAT	THINGS TO DO
-Appetizer- $5a + 7 > 16$	-See- $-3b - 2 \leq 13$
A~1.8 **Dakos Salad**	B~-5 **Santorini Architecture**
-Entrée- $\frac{-3x + 4}{2} < 9$	-Try- $\frac{5y - 15}{4} > 20$
X~-4.667 **Pita with Gyros**	Y~19 **Beaches of Crete**
-Dessert- $6 - 4(6m + 7) \geq 122$	-Visit- $-1 - 6n - 6 \leq -11 - 7n$
m~-6 **Melomakarona**	N~-4 **Acropolis**

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FANTASTIC FINALE

(Choose 2 of the 3 application problems. Use the *Decoder* to uncover the clues)

MYSTERY A	MYSTERY B	MYSTERY C
Leah is riding in a cab that charges $2.00 for a ride plus $0.55 per mile. Since Leah only has $20, write an inequality and determine the number of miles she would be able to travel. Round to the nearest mile that will not exceed the limit.	Jimmy is eating appetizers that have 120 calories each. He only plans to eat 550 calories overall. Write an inequality and determine the most appetizers he can eat without exceeding the limit.	Celiza plans to buy souvenirs for her family on her trip. She has $150 to spend. She wants to buy a hoodie for herself that costs $60. She wants to spend the rest on shirts that cost $14 each. Write an inequality and determine the most shirts she can afford.

MYSTERY A:
2 +0.55x <20
32.7 miles
So
32 Europe

MYSTERY B:
He can eat 4.

Petroleum Oils

MYSTERY C:
She can afford 6.

Athens

DECODER

Find the answers from the prior problems to retrieve the clues. Not all items in the Decoder will be used.

13/2	Africa	-5	Santorini Architecture	32.1	Pan for Gold
165	Tomb of T'Challa	-18	Ride a Horse	4	Petroleum Oils
-6	Melomakarona	6	Athens	1.8	Dakos Salad
-4	Acropolis	3.2	Minerals	10	Middle East
0	Cricket Match	-1.4	Rock of Gibraltar	19	Beaches of Crete
32	Europe	7/4	Empanadas	8	Rotisserie Chicken
1	Agriculture	-4.667	Pita with Gyros	5	Caprese Salad

WHERE IN THE WORLD?

THE COUNTRY PROFILE OF...

Greece

Capital City	Athens		Population	11
World Region	Europe		GDP	249
Chief Export	Petroleum Oils		Area	131,960
Foods to eat	Dakos Salad, Pita with Gyros, Melomakarona		Life Expectancy	80.7
Things to do	Santorini Architecture, Beaches of Crete, Acropolis		Year of Independence	1821