

Good Morning!

Today I will go out of my way to compliment another student!

Today you will need:

- Pencil
- Corrected Homework
- Class Notebook
- Calculator



Warm-Up

In your graph spiral, answer the following question:

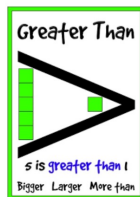
An inequality is a statement that one quantity is less than or greater than another. Translate the everyday phrases below into inequality words. Then, write the inequality using variables and inequality symbols.

One example has been done for you.

Everyday phrase	Translation	Inequality
at least six glasses	<input type="text"/>	<input type="text"/>
below 40°	The temperature is less than 40°.	$t < 40$
fewer than 20 calories	<input type="text"/>	<input type="text"/>
at most \$10	<input type="text"/>	<input type="text"/>

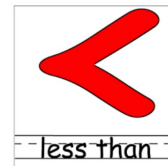
Words that mean.....

In your groups, make a list of all the words you can think of that mean greater than.....



Words that mean.....

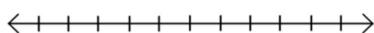
In your groups, make a list of all the words you can think of that mean less than.....



Writing and Solving Inequalities

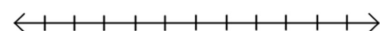
Mr. Adamo's class decides to order posters that advertise the walkathon. Posters by McGowan charges \$15 plus \$0.50 per poster.

1. The class has a budget of \$24 for posters. How many posters can they order? Write an inequality for the cost in terms of number of posters p and solve to find the answer.
2. What does your answer mean in words?
3. Graph the solution on a number line.



At Fabulous Egoian Bakery, he makes a profit of \$4.95 per cake, but still has to deduct \$825 of expenses.

1. Ethan wants to make a profit of more than \$800. How many cakes does he need to bake? Write an inequality for the profit in terms of number of cakes n and solve to find the answer.
2. What does your answer mean in words?
3. Graph the solution on a number line.



Homework:

Write and Solve Inequalities worksheet

Warm-Up

In your graph spiral, answer the following question:

Yesterday, you translated everyday phrases into inequalities. Now, write the inequality using variables and the inequality symbols. One example has been done for you.

Everyday phrase	Translation	Inequality
at least six glasses	The number of glasses is greater than or equal to 6.	<input type="text"/>
below 40°	The temperature is less than 40°.	$t < 40$
fewer than 20 calories	The number of calories is less than 20.	<input type="text"/>
at most \$10	The price of the gift is less than or equal to \$10.	<input type="text"/>

Warm-Up

In your graph spiral, answer the following question:

Yesterday, you translated everyday phrases into inequalities. Now, write the inequality using variables and the inequality symbols. One example has been done for you.

Everyday phrase	Translation	Inequality
at least six glasses	The number of glasses is greater than or equal to 6.	$g \geq 6$
below 40°	The temperature is less than 40°.	$t < 40$
fewer than 20 calories	The number of calories is less than 20.	$c < 20$
at most \$10	The price of the gift is less than or equal to \$10.	$p \leq 10$

Warm-Up

In your graph spiral, answer the following question:

An inequality is a statement that one quantity is less than or greater than another. Translate the everyday phrases below into inequality words. Then, write the inequality using variables and inequality symbols.

One example has been done for you.

Everyday phrase	Translation	Inequality
at least six glasses	The number of glasses is greater than or equal to 6.	$g \geq 6$
below 40°	The temperature is less than 40°.	$t < 40$
fewer than 20 calories	The number of calories is less than 20.	$c < 20$
at most \$10	The price of the gift is less than or equal to \$10.	$p \leq 10$

Writing and Solving Inequalities

Ms. Chang's class decides to order posters that advertise the walkathon. Posters by Sue charges \$15 plus \$0.50 per poster.

- The class has a budget of \$24 for posters. How many posters can they order? Write an inequality for the cost in terms of number of posters p and solve to find the answer.

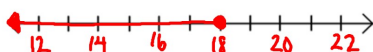
$$\begin{array}{r} 24 \geq 15 + 0.5p \\ -15 \quad -15 \\ \hline 9 \geq 0.5p \\ \div 0.5 \quad \div 0.5 \\ \hline 18 \geq p \end{array}$$

$$\begin{array}{r} 15 + 0.5p \leq 24 \\ -15 \quad -15 \\ \hline 0.5p \leq 9 \\ \div 0.5 \quad \div 0.5 \\ \hline p \leq 18 \end{array}$$

- What does your answer mean in words?

The class can order 18 posters or less

- Graph the solution on a number line.



At Fabulous Fabian's Bakery, he makes a profit of \$4.95 per cake, but still has to deduct \$825 of expenses.

- Fabian wants to make a profit of more than \$800. How many cakes does he need to bake? Write an inequality for the profit in terms of number of cakes n and solve to find the answer.

$$\begin{array}{r} 4.95n - 825 > 800 \\ + 825 \quad + 825 \\ \hline 4.95n > 1625 \\ \div 4.95 \quad \div 4.95 \\ \hline n > 328.28 \end{array}$$

$$\begin{array}{r} 800 < 4.95n - 825 \\ + 825 \quad + 825 \\ \hline 1625 < 4.95n \\ \div 4.95 \quad \div 4.95 \\ \hline 328.28 < n \end{array}$$

- What does your answer mean in words?

Fabian needs to bake more than 328 cakes

- Graph the solution on a number line.

