

Name _____

Date _____

Word Problems Leading to Inequalities - Independent Practice Worksheet

Complete all the problems.

1. Julia has \$80. She wants to purchase a nail paint set for \$16 and earrings. She spends the rest of the money on earrings. Each pair of earrings costs \$8. Write an inequality for the number of pairs of earrings she can purchase.



2. Solve $0.7x - 2 < 5.5$ and graph the solution on a number line.

3. Christina goes to the market with \$50. She buys one papaya for \$20 and spends the rest of the money on bananas. Each banana costs \$6. Write an inequality for the number of bananas she can purchase.

4. Solve $1.2x + 8 < 9.6$ and graph the solution on a number line.

5. Billy goes to the store. He has \$90. He wants to purchase a leather jacket for \$45, a hat for \$10, and the rest on jeans. Each pair of jeans costs \$35. Write an inequality for the number of jeans he can purchase.

6. Solve $2.6x + 2 > -12.5$ and graph the solution on a number line.

7. Rebecca bought one gold fish (\$32) and one star fish (\$12). She spends the rest of her money on guppy fish. She starts with \$80. Each guppy costs \$6. Write an inequality for the number of guppies she can purchase.

8. Erin has \$50. She wants to purchase a cell phone (\$20) and spend the rest on music CDs. Each music CD costs \$8. Write an inequality for the number of music CDs she can purchase.



9. Solve $2.2x - 5 < -13$ and graph the solution on a number line.

10. Solve $0.4x - 4 < 2.4$ and graph the solution on a number line.



Basic Practice:

Write a linear inequality for each situation.

Mr. Crawford is ordering pizzas and breadsticks for a school pizza party and has a budget of \$81, but no more. An order of breadsticks costs \$7 and a pepperoni pizza costs \$13.

Select the inequality in standard form that describes this situation. Use the given numbers and the following variables.

- x = the number of orders of breadsticks
- y = the number of pepperoni pizzas

The Springtown High School science department can spend no more than \$2,700 on textbooks this year. The department needs to buy both Biology textbooks, which cost \$57 apiece, and Chemistry textbooks, which cost \$72 apiece.

Select the inequality in standard form that describes this situation. Use the given numbers and the following variables.

- x = the number of Biology textbooks
- y = the number of Chemistry textbooks

A landscaping business is purchasing plants from a nursery to finish a project. It will cost \$14 each to buy each tree and \$5 each to buy each bush. The landscaper wishes to keep the spending under \$1,000.

Select the inequality in standard form that describes this situation. Use the given numbers and the following variables.

- x = the number of trees
- y = the number of bushes

In order to raise money to attend upcoming competitions, the debate team at Arlington High School is selling apple cider and hot chocolate at a basketball game. They hope to make at least \$240 in revenue at tonight's game, with hot chocolate selling for \$1 and hot apple cider selling for \$2.

Select the inequality in standard form that describes this situation. Use the given numbers and the following variables.

- x = the number of hot chocolates sold
- y = the number of apple ciders sold

Worksheet Level 4:

Goals:

- Write a linear inequality from a word problem
- Graph a linear inequality in two variables

Concept # _____

Practice #1

Each country is being asked to donate food packages and medicine packages.
 Each country sent a summary from their budget committee. (see below)
 For each country, write a linear inequality and graph it using www.desmos.com
 Use the graph to decide on the number of food packages and medicine packages that each country should give.
 (all countries should give the same amount each)

Country A	Country B	Country C
<p>Memo from your country's Budget Committee:</p> <p><i>Because we are spending so much money on improving our hospitals right now, our funds are very limited. We are constrained to spending up to, but not more than \$300,000. Each food package will cost our country \$900, and each medicine package will cost \$600.</i></p>	<p>Memo from your country's Budget Committee:</p> <p><i>Because we are spending so much money on improving our schools right now, our funds are very limited. We are constrained to must spending no more than \$600,000 total. Each food package will cost our country \$500, and each medicine package will cost \$2000.</i></p>	<p>Memo from your country's Budget Committee:</p> <p><i>Since our country is doing so well financially, our citizens voted that we must spend more than \$540,000 in aid to other countries. Each food package will cost our country \$2000, and each medicine package will cost \$3000.</i></p>

Inequality: _____

Inequality: _____

Inequality: _____

Country D	Country E	Special Assignment
<p>Memo from your country's Budget Committee:</p> <p><i>Since our country is doing so well financially, our citizens voted that we must spend more than \$900,000 in aid to other countries. Each food package will cost our country \$5000. Each medicine package will cost \$2000.</i></p>	<p>Memo from your country's Budget Committee:</p> <p><i>Luckily, our country has many medical supplies, so there is no limit to the number of medicine packets we can offer. However, due to the farming restrictions in our country, we are constrained to donating fewer than 250 food packages in order to feed our own people.</i></p>	<p>A special note from the Secretary General:</p> <p><i>Since your country is a member of the Emergency Fund Committee, I have a special job for you.</i></p> <p><i>We are expecting food shortages in the near future because of the severe drought in Sudan. Each country must give at least 100 food packages.</i></p>

Inequality: _____

Inequality: _____

Inequality: _____

Each Country should donate _____ food packages and _____ medicine packages.

Practice #2

Write an inequality for each problem below.

Mrs. Quinn is making her special cantaloupe-and-honeydew salad for a school banquet and doesn't want to spend more than \$30 at the supermarket. Currently, cantaloupes cost \$3 each and honeydew melons cost \$2 each.

Select the inequality in standard form that describes this situation. Use the given numbers and the following variables.

- x = the number of cantaloupes she will purchase
- y = the number of honeydew melons she will purchase

During a special sale, all video games cost \$26 and all movies cost \$14. Derrick plans to spend some or all of his \$220 in birthday money on these movies and video games.

Select the inequality in standard form that describes this situation. Use the given numbers and the following variables.

- x = the number of video games Derrick can buy
- y = the number of movies Derrick can buy

The manager of an electronics store projects that the store should achieve more than \$21,000 in revenue from TVs and DVD players every day in order to remain profitable. Its DVD players sell for \$380, and TVs sell for \$530.

Select the inequality in standard form that describes this situation. Use the given numbers and the following variables.

- x = the number of DVD players sold
- y = the number of TVs sold

Allie is using ribbon to create girls' hair barrettes. She has a total of 64 yards of ribbon with which to make her creations. A regular barrette requires 1 yard of ribbon and a deluxe barrette uses 4 yards of ribbon.

Select the inequality in standard form that describes this situation. Use the given numbers and the following variables.

- x = the number of regular barrettes Allie can make
- y = the number of deluxe barrettes Allie can make