## Steps for Solving Story Problems

1) Read the Problem
2) Identify the Question – *What are they asking for?* *Highlight it.*
3) Find the Important Information – *underline it*
4) Write an Inequality
5) Solve the Inequality
6) Answer the Question – *label it, write in a sentence*

## Solving Story Problems

1. Mrs. Corie wants to order DVDs from the Amazon. Each DVD costs $15.99 *plus* and shipping for the entire order is $9.99. Mrs. Corie only has $100 to spend. How many DVDs can Mrs. Corie order without exceeding her $100 limit?

$X = \#$ of DVDs

$$\boxed{\text{Shipping}} + \boxed{\text{DVDS}} \leq \boxed{\text{total amt}}$$

$$9.99 + 15.99X \leq 100.00 - 9.99$$
$$-9.99$$

$$\frac{15.99X}{15.99} \leq \frac{90.01}{15.99}$$

$$\boxed{X \leq 5.62}$$

*Mrs. Corie can buy 5 DVDs*

2. You are collecting sponsors for a 10-mile walk. So far, you have collected $230 in donations. How much must the last sponsor pledge per mile to reach or exceed your goal of $300?

$X = $ amt of money

$$\boxed{\begin{array}{c}\text{amt}\\\text{already}\\\text{raised}\end{array}} + \boxed{\begin{array}{c}\text{amt}\\\text{going to}\\\text{pledge}\end{array}} \geq \boxed{\text{goal}}$$

$$230 + 10X \geq 300$$
$$-230 \qquad\qquad -230$$

$$\frac{10X}{10} \geq \frac{70}{10}$$

$$\boxed{X \geq 7}$$

*They must pledge at least $7*

3. Charlie is getting ready to celebrate his 13<sup>th</sup> birthday and he wants to have a party. Chuck E Cheese charges a $50 fee for a birthday party and $5.50 for each person. Zap Zone charges an $80 fee for a birthday party and $3 for each person. After how many people would be it cheaper for Charlie to have his party at Zap Zone?

$X = $ # of people

$$\boxed{\text{Chuck E}} \geq \boxed{\text{Zap Zone}}$$

$$50 + 5.50x \geq 80 + 30x$$
$$-50 \qquad\qquad -50$$
$$5.50x \geq 30 + 3.x$$
$$-3 \quad x \qquad\qquad -3 \ x$$
$$\frac{2.50x}{2.5} \geq \frac{30}{2.5}$$
$$\boxed{x \geq 12}$$

it would take __13__ people for ZZ to be cheaper

4. Cassidy has $500 in her savings account at the beginning of summer. She wants to have at least $150 in her savings by the end of summer. She withdraws $30 from her account each week to pay for her weekly activities. How many weeks can Cassidy withdraw money from her account?

$X = $ # of weeks

$$\boxed{\text{Savings in June}} - \boxed{\text{amt Spent}} \geq \boxed{\text{end balance}}$$

$$500 - 30x \geq 150$$
$$-500 \qquad\qquad -500$$
$$\frac{-30x}{-30} \geq \frac{-350}{-30}$$
$$\boxed{x \leq 11.\overline{6}}$$

it would take __11__ weeks

5. Tickets to the Toledo Mud Hens games are $12 each, and season tickets are $396 for the same type of seat. Parking is $5 per game. How many times do you have to use the season pass for the total cost of the season ticket option to be less than the total cost of the individual-game ticket option?

$X = $ # of games

$$\boxed{\text{Season tks.}} < \boxed{\text{tks per game}} + \boxed{\text{parking}}$$

$$396 < 12x + 5x$$
$$\frac{396}{17} < \frac{17x}{17}$$
$$\boxed{23.29 < X}$$

You'd have to go to @ least __24__ games

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**Homework: Inequality Story Problems Extra Practice wkst.**

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Adapted: