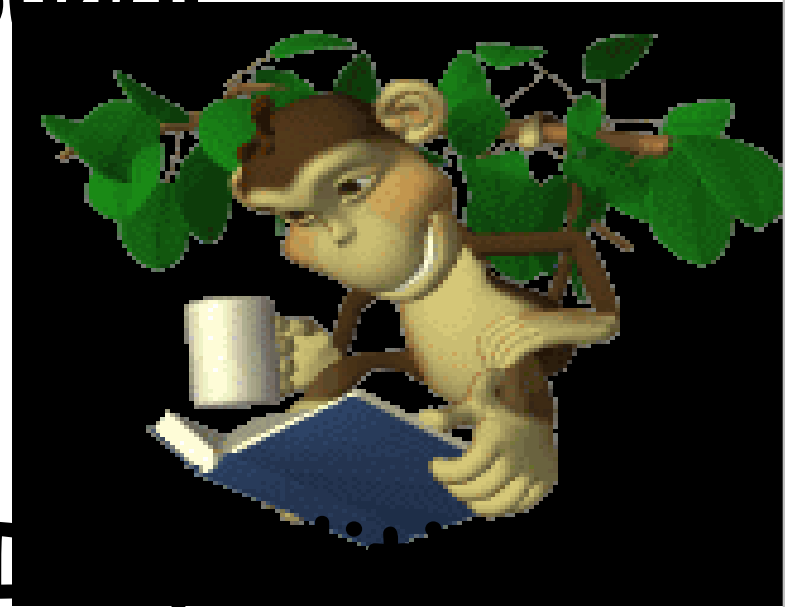


# Don't Monkey Around!

**NO RESPONDERS  
TODAY!!!**



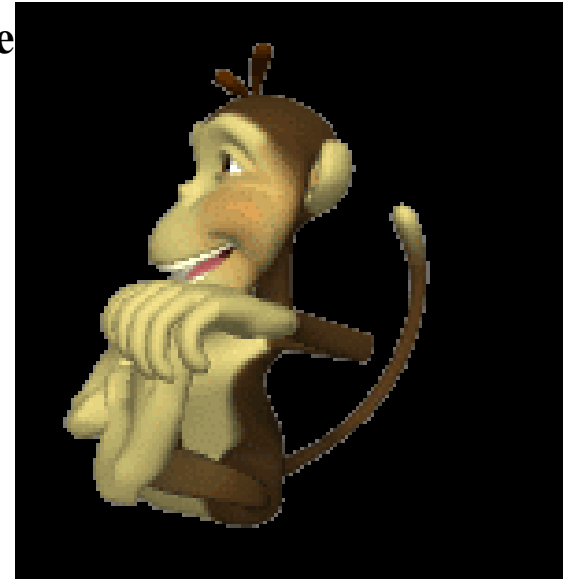
## 1.4 Equations & Inequalities

## 1.5 Problem Solving

**An equation is formed when an equal sign is placed between two expressions. An equation that contains one or more variables is an open sentence.**

**Another type of open sentence is an inequality. This is formed when an inequality symbol is placed between two expressions.**

**< is less than  
is  $\leq$  less than or equal to  
> is greater than  
is  $\geq$  greater than or equal to**



**A solution of an inequality is a number(s) that produces a true statement when it's substituted for the variable.**

**Write a mathematical expression!**

**The product of 16 and x is equal to 32.**

$$16x = 32$$

**The quotient of 16 and x is greater than or equal to 32**

$$\frac{16}{x} \geq 32$$

**The quotient of x and 16 is less than 32.**

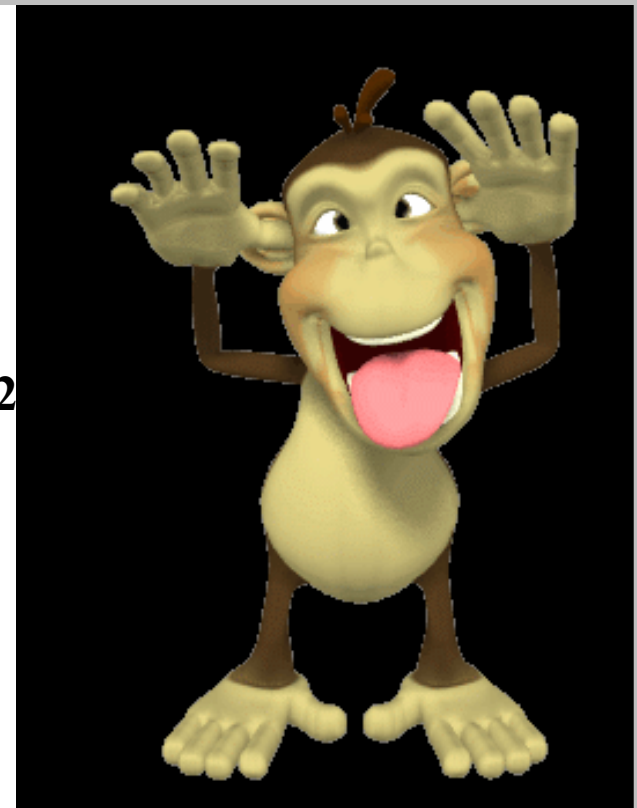
$$\frac{x}{16} < 32$$

**The sum of 20 and x is greater than 30.**

$$20 + x > 30$$

**The difference of 4 and x is less than or equal to 30.**

$$4 - x \leq 30$$



# Let's play a game!



s?

## **Problem Solving MAGIC QUESTIONS!**

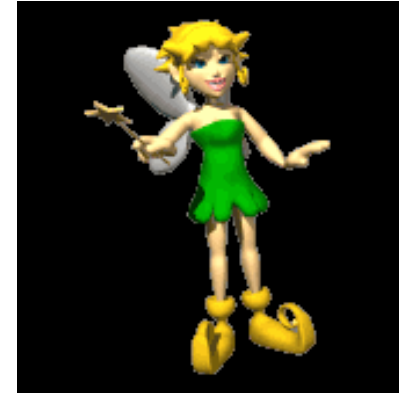
**What do they want to know?**

**Do I understand all the vocabulary?**

**What is the important data?**

**Does my answer make sense?**

**Does drawing a picture help?**



Your school is building a new computer center. Four hundred square feet of the center will be available for computer stations. Each station requires 20 square feet. You want to find how many computers stations can be placed in the new center. The equation  $20x=400$  will solve the problem. What do 20, x and 400 represent? Solve the equation.



Handwritten notes in green and red ink:

- Red: How many Computers?
- Green: 20 stations
- Green: each station
- Green: total sq ft

A green circle highlights the number 20 in the text above and the number 20 in the division problem below.

$$\begin{array}{r} 20 \overline{)400} \\ \underline{-20} \phantom{0} \\ 200 \\ \underline{-200} \\ 0 \end{array}$$

You are taking a trip by automobile with the family of a friend. You have \$65 to help pay for gas. It costs \$15 to fill the tank. Can you completely fill the tank four time? Use the inequaility  $15x \leq 65$  to model the situation. What do 15, x and 65 represent?



$$\begin{array}{r} 4 \\ 15 \overline{) 65} \\ \underline{60} \\ 5 \end{array}$$

\$65 for gas  
\$15 for 1 tank

Yes

Jeff lives in a state in which speeders are fined \$20 for each mile per hour (mi/h) over the speed limit. Jeff was ticketed for \$260 for speeding on a road where the speed limit is 45 mph. Jeff wants to know how fast he was driving.



Handwritten notes in green and red ink:

45  
13  
29260

45  
54 mph

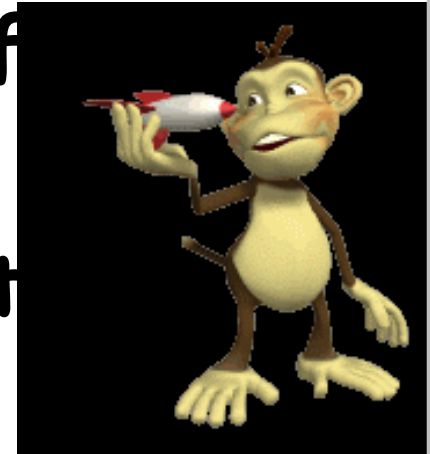
How fast?

Fine \$260

Speed limit 45

\$20 per mi over 45

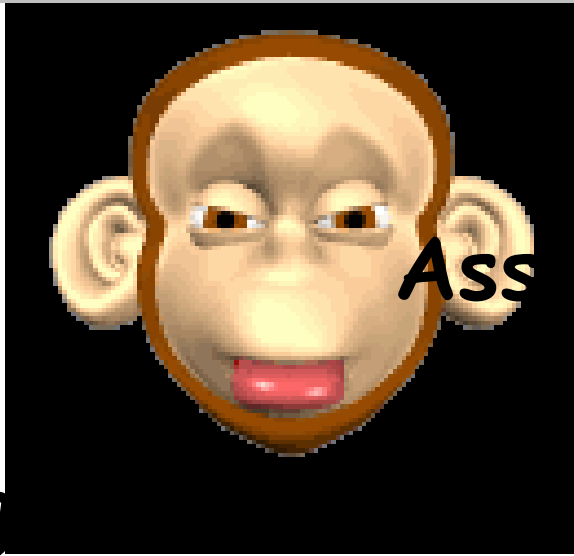
A commercial airplane has been flying for two hours and has flown a distance of 360 miles. How fast has it been flying?



$$\frac{360}{2} = 180 \text{ mph}$$

How fast?

2 hours  
360 miles



## Assignment!

Pg 5 (Answer Yes or No)

Pg 28 #56 - 64 Omit 60 (Answer A - G)

Pg 29 #69-76 (Number answers only)

Pg 35 #14-28 even (Use X for all variables)

38  
39  
40  
41  
42  
43  
~~44~~  
45

1  
2  
3  
4  
5  
~~6~~  
8

} Answer  
Answer  
Answer

Scraper  
-work